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V. aestivalis

Sample Taken 7/8/42
Strickland 7/9/42

Under surface of mature leaf shows ^{small} aggregated clusters of rusty
wooly pubescence - not matted at all. This holds for inter-vein
as well as vein surfaces. Epithelium closely visible. Marked
aggregation of setaceous hairs in axils of veins - these hairs
extending out for some distance in single or thin rows
along the smaller veins

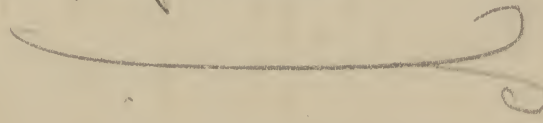
Petiole glabrous

Upper surface of leaf almost entirely glabrous - a little rusty
pubescent. Showing at insertion of petiole and a bit on the
basal portion of the veins at the basal sinus

Stems of young growing point of cane - mostly glabrous with
only a trace of rusty wooly pubescence. Petioles and veins of young
leaves lightly rusty - mostly pubescent and setaceous areas showing
some coarseness - still hairless - becoming thinner as the leaf
expands

Upper surface of small leaves scanty - rusty wooly pubescent

Tendrils single - forked
Bluish brown on young - cane



Agave

Sample Taken 7/6/42
Plucked 7/7/42

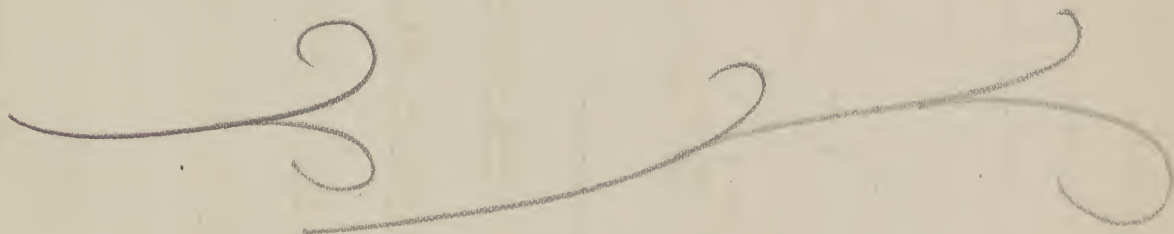
Under surface of mature leaf thickly covered with
whitish woolly pubescence. Finer subdivisions of the
veins clearly visible. Light pubescence on veins and petiole.
No setaceous hairs seen anywhere.

On upper side of mature leaf very scanty pubescence in
form of clumps on midrib and veins - not confined to veins.

Pubescence on top of young growing cone very scanty
Inter-vein areas on under side of young leaves fairly well
fitted but veins and their subdivisions clearly visible the
hairiness being less pronounced there.

No setaceous hairs seen anywhere.

Tendrils of this specimen both single- and 2-jointed



V. Andersonii

Samuel Taber 7/8/42
Middell 7/9/42

Under surface of mature leaf almost completely glabrous but with many long setaceous hairs along veins and veinslets, tipped somewhat at apices of veins, Under surface epithelium closely ribbed. At base of strongly laminar apex on the petiole but setaceous hairs make up most of the light grayish upper surface of mature leaf glabrous and generally free from all setaceous hairs even along main veins.

Young growing point of cane shows light hairs

Very light hairy pubescence appears on under side of young leaves but generally detached setaceous hairs are found on the fine branches of the veins on the under side of fairly small young leaves (1"-2" diam).

Upper surface of young leaves show very fine closely hair and setaceous hairs show to some extent along veins on upper surface though not so marked as in *V. bulleyi*.

Tendrils single and single-jointed in this specimen

— 2 —

V. angustata

Sample taken 7/8/42
Studied 7/10/42

Under surface of mature leaf thickly but uniformly covered with
whitish tomentum. There appears to be also a few setaceous hairs
at apex of veins but these not clearly distinct in this specimen due
to species similarities.

Petiole mostly pubescent
upper surface long hairy pubescent - for the most part extending
inward from base of leaf to tips.

Young young fruit, same whitish appressed, hairy pubescent and same
is true for petals of the young leaves.

Young leaves show mostly hairs on both upper & under
side of leaves.

Tendrils single-jointed

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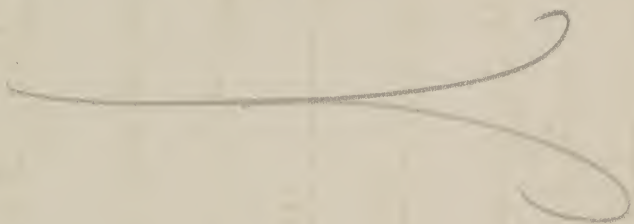
Baccharis

Sample taken 7/8/42
Studied 7/8/42

Plants are almost completely glabrous beneath but with
long setaceous hairs prominent along veins and their branches
No tufting at the apex of veins

Petioles on upper surface very scabrous an occasional
very fine silky hair seen. Long setaceous hairs present on
upper surface of leaves

Young growing point nearly glabrous but with few long hairs
Plants of young leaves long hairs with long setaceous hairs
on veins of under side, this condition very pronounced in young
leaves. Petioles on under side of leaves almost completely absent
on intermediate surface except where tinged with setaceous hairs on veins
Upper surface of young leaves lightly pubescent with setaceous
hairs prominent along veins



V. Baileyana

Sample taken 7/8/42 Beetham
Studied 7/9/42

Under surface of mature leaf lightly woolly pubescent - more marked along veins. Setae along sides of veins and out onto the smaller veins. Intervenial area, chiefly smooth. Stomata fairly prominent. A little tufting of pubescence at axils of veins but this not prominent.

Petiole lightly woolly pubescent with rows of setaceous hairs. Upper surface of mature leaf nearly or entirely glabrous but numerous short setaceous hairs are prominent on the veins.

This condition not observed in any other species so far examined.

Growing point of young leaves short glabrous.

Under surface of young leaves short completely glabrous - a few very fine cobwebby hairs present. The prominent feature is the heavy equipment of setaceous hairs on petioles and veins with some tufting at axils.

Upper surface of young leaves short even slightly glabrous but vein prominently equipped with short setaceous hairs.

Teeths very small but 2-fringed

Sample taken 7/6/42
March 7/7/42

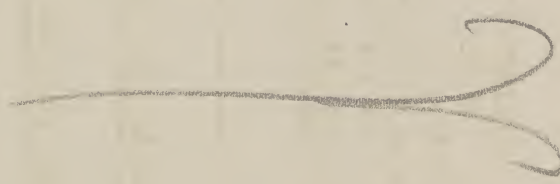
Beaver

Rather scanty, rusty, cobwebby pubescence covering entire under surface of the mature leaf but most pronounced along the main veins and their subdivisions. Small microscopical setaceous tufts in axils of the veins, more particularly pronounced at the base of the leaf where veins diverge. Retacum hairs not noted elsewhere.

Upper surface of mature leaf nearly glabrous - there being a little cobwebby pubescence merely along upper surface of the veins. Single hairs rarely found on internode surface.

Thin ^{or woolly} cobwebby pubescence along young growing point - scanty over entire surface of young leaves - both above and below.
No setaceous hairs noted on young leaves.

Tendrils in this specimen single jointed -



V. berlandieri

Sample taken 7/8/42
studied 7/11/42

Middle surface of mature leaf shows only very scanty very fine cobwebby pubescence with small setaceous hairs generally distributed over interveinal spaces on the small branchlets of veins, though more concentrated along main veins or ribs. Slight tufting at base of the veins but not prominently so. Basal petiole densely setaceous the hairs being very fine.

Upper surface of the mature leaf shows a few fine pubescent strands - particularly along the veins. Fine setaceous hairs line the veins.

Young growing tip of cane mostly pubescent with the single hairline extending up the petioles which show beneath very abundant very fine setaceous hairs. The petioles of the main axis of the small branches is just about like that of the mature leaves though the brownish woolly pubescence is a bit more marked along the veins of the smallest leaves ^{of young leaves}.

Fine hairs on upper surface, as more marked than on under side but this is not heavy. Setaceous hairs occur along the veins in all but the tipmost small leaves.

Tendrils almost rudimentary single-jointed in this specimen.

Bracton

Sample Taken 7/6/42
Stucked 7/7/42

Under side of mature leaf fairly densely covered with
fuzzy pubescence, veins as well as inter-vein areas - becoming more
or less rusty in color. This applies also to the petiole. No setaceous
hairs seen anywhere. No accumulations or concentrations of pubescence
in axils of veins.

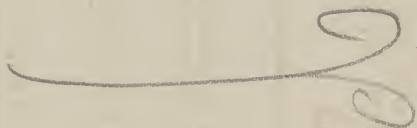
Upper surface of mature leaf nearly glabrous - an occasional hair
or two of pubescence seen.

Growing point of cane shows longitudinal cobwebby sheaths
which extend up the petiole of the young leaves and up on to the
veins. Inter-vein areas on under side of young leaves densely
fuzzed with whitish pubescence becoming brownish.

Upper surface of young leaves show cobwebby pubescence
sheath becomes thin as the leaf expands.

No setaceous hairs seen anywhere.

Tendrils of this specimen 1-forked



In the vineyard the Bracton vine looks like that
of Ontario

Catawba

Sample Taken 7/6/42
Studied 7/7/42

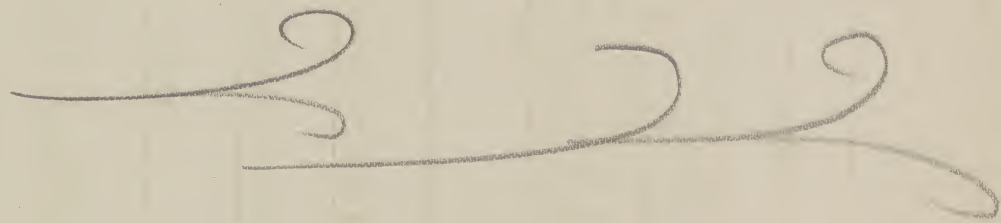
Moderately heavy felted pubescence over entire under side of mature leaf - Coarsely hairs along veins. Pubescence turning slightly rusty in color. Petiole shows coarsely hairs in moderate abundance. No setaceous hairs noted anywhere.

Upper surface of mature leaf almost completely glabrous a few coarsely hairs seen along veins.

Growing tips of cane show moderate amount of coarsely pubescence extending longitudinally along the stem and extending out on petioles of young leaves.

Young leaves show dense white felt on internode areas on under side. Veins show longitudinal coarsely strands - white or turning rusty in color. No setaceous hairs noted anywhere.

Tendrils of this specimen both single- and 2-faceted



Chaupauel

Sample Taken 7/6/42
Studied 7/7/42

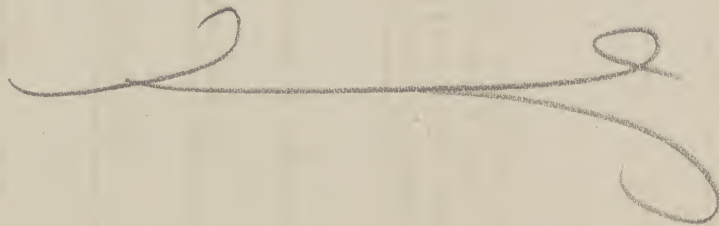
Under surface of mature leaf fairly heavily felted beneath with whitish pubescence. Veins show moderate amount of short hairs extending longitudinally - turning rusty in color. The axillary tufts of setaceous hairs on other pubescence present.

Upper surface of mature leaf shows some short hairs appearing to arise primarily from the veins and their subdivisions.

Young growing tip of cane quite heavily felted with white - turning rusty longitudinal hairs - some appear to the tendency even to their tips. Under side of young leaves densely felted in intervein areas, but hairs are longitudinally along the veins on the under side. No setaceous hairs seen anywhere.

Upper surface of young leaves fairly heavily covered with whitish woolly hairs.

Tendency of this specimen 2-forked:-



Champerini

Sample taken 7/6/42

Studied 7/7/42

Under surface of mature leaf shows densely matted pubescence over entire intervein area, as well as on veins - whitish becoming brown or tawny in color. Considerable pubescence on petiole more or less appressed because of position in lamina etc. No setaceous hairs or axillary tufts anywhere.

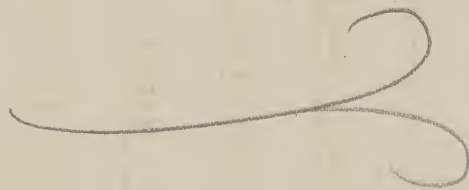
Upper surface of mature leaf nearly glabrous with an occasional mop of cobwebby pubescence more particularly along the veins.

Young growing tip shows densely appressed long petioled hairs extending up petioles & veins of the young leaves. Intervein areas densely covered with whitish mat which thins somewhat in the older young leaves but still is thick.

No axillary tufts or setaceous hairs present.

Upper surface of young leaves shows thin cobwebby pubescence extending longitudinally from base toward tip of leaf and becoming thinner as the leaves expand.

Tendrils single-jointed in this specimen



V. cinerea

Sample taken 7/8/42
studied 7/10/42

Under surface of leaf thickly - pubescent with very fine brownish cobwebby threads. All larger veins and most of the medium ^{and smaller} ~~type~~ branches are heavily armed with setaceous hairs. No particular tufting at the axils of the veins. Petiole thickly with setaceous hairs.

Upper side practically glabrous except lightly along veins which also show short prickly hairs.

Young growing point shows abundant closely appressed longitudinal hairs. Growing margin on the rosette. Under surface of young leaves shows a little more rosette pubescence than on mature leaves but the leaves thinner as the leaves expand. - Hairs do not follow veins particularly, but setaceous prickly hairs do grow along the veins and the branches.

The upper surface of young leaves shows distinct Lenticles - becoming thinner as leaves expand. The setaceous hairs seen on upper surface.

No Uredites on this specimen

Cladia

Sample taken 7/6/42

Plucked 7/7/42

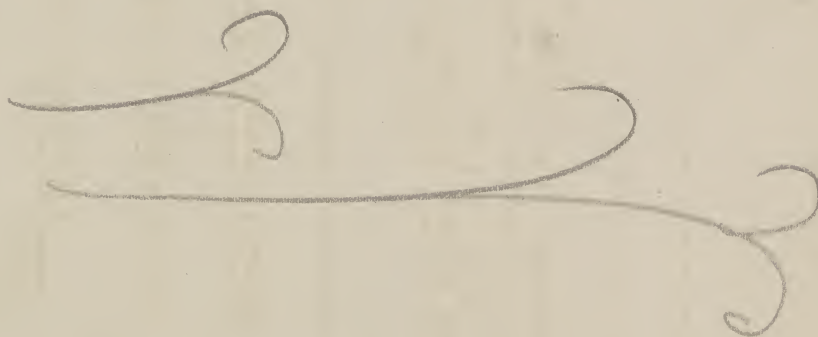
Under surface of mature leaf shows scanty tomentose pubescence except along veins which also show fairly abundant setaceous hairs - even on some of the smaller vein branches, *Stomata* fairly prominent. Apical tufts present made up of combined setaceous hairs and woolly pubescence.

On upper surface slight-woolly pubescence and setaceous hairs are noted on the veins, otherwise nearly glabrous.

On the young growing point tomentose pubescence is present but rather scanty. It is quite prominent on the under surface of very young leaves but thins out as the leaves expand.

Characteristically light pubescence with abundant setaceous hairs along veins and tufts at the apex of the ribs characterizing the under side of fairly young leaves though not so prominently as in the case of *theocha* (straight *Leucocarpus*) *Moore* *Leucocarpus* "head" almost.

Tendrils both single & 2-forked



Cochise

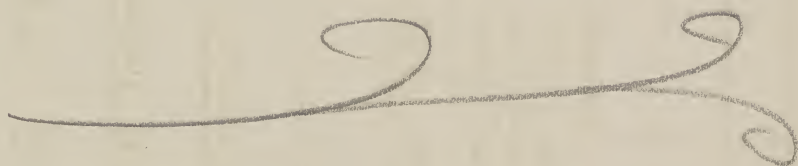
Sample taken 7/6/42
Studied 7/7/42

Moderate amount of cobwebby felt covering entire under surface of the mature leaf - becoming rusty in color. Petiole and basal portions of the veins reddish. Pubescence scanty on petiole and veins. No retaceous hairs seen anywhere.

Upper surface of the leaf completely glabrous.

Young growing point shows some rusty-cobwebby hairs along stem and young petioles - lying close longitudinally. Same applies to the veins on the under side of leaves. Inter-vein areas densely felted - whitish. Upper surface of young leaves very thickly but evenly pubescent with fine cobwebby hairs between veins. Longitudinal rusty cobwebby strands lie along veins.

Tendrils of this specimen 2-farked: -



Concord

Sample taken 7/6/42
Studied 7/7/42

Dense felt pubescence over entire under surface of leaf white at first but becoming rusty. Pubescence on veins present with the strands for the most part running lengthwise of the vein. Becomes more or less branched as the result of ordinary friction. This is particularly noted on the petiole.

No setaceous hairs anywhere or accumulation of pubescence or setaceous tufts at the axils of the veins.

Upper surface of the leaf mainly glabrous, but some whorled hairs follow the veins and are sparsely scattered over the surface of the leaf.

Whorled pubescence is present on the young growing tips - silicles white at first but becoming rusty. Dense felt over entire internode surface of young branches. Pubescence less pronounced on the veins. No setaceous hairs anywhere.

Tendrils 2-forked in this specimen



V. cardifolia

Sample taken 7/8/42
Studied 7/9/42

Under surface of main stem free of tomentum or woolly pubescence. But veins are densely covered with setaceous hairs extending out with finer branches.

Petiole setaceous - hairy

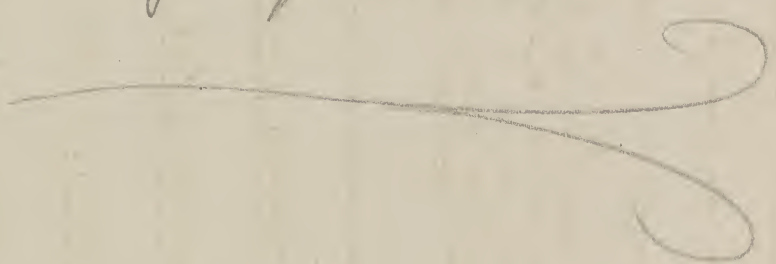
Upper surface of leaf glabrous but setaceous hairs here the main vein surfaces as observed in V. Baileyana.

(V. Baileyana looks like an offshoot of V. cardifolia - a bit more slender as to young parts with more acuminated leaves in the case of cardifolia as compared with Baileyana)

Young growing point of cane almost completely glabrous with moderate amount of hairs on petioles and under surface of young leaves. Retracium hairs not prominent on under side of young leaves.

Very scant woolly tomentum on upper side of young leaves with some very fine setaceous hairs on main veins of young leaves.

Tendrils single - jointed



Cynthisia

Sample taken 7/8/42
Studied 7/10/42

Under surface of the mature leaf shows the toothed rusty-mottled pubescence characteristic of *V. acuticula*. Petiole hairs abundant along main ribs as seen but less tufted at axils of veins. Some rusty-mottled pubescence on petiole - more abundant near insertion at base of leaf.

Upper surface of mature leaf glabrous.

Rusty hairs on young growing tip and veins of under side of ^{young} leaves. Thin cobwebby pubescence on under side of small leaves in the internodal area.

Petiole hairs not prominent on under vein surfaces of young leaves.

Upper surface of young leaves show little hairs except along veins.

Teardrop single-toothed



Delaware

Ranunculus 7/6/42
studied 7/6/42

Mature leaves almost completely glabrous underneath - just a mere scanty cobweb pubescence. Same applies to the petiole and ribs.

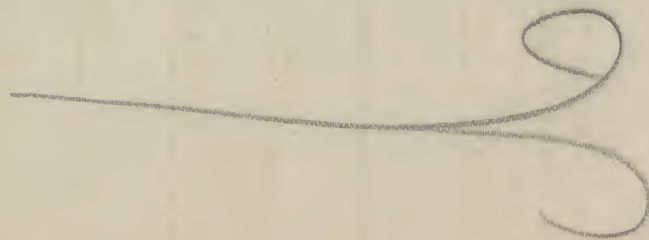
Young tips & ribs also nearly glabrous but the small leaves show considerable white pubescence. It looks as though the pubescence is present in the young leaves and then same is thinned out as the leaf grows without any ^{or little} increase in amount.

Upper surface of leaf nearly completely glabrous - an occasional cobwebby hair only showing. The condition of the upper surface of the young leaves shows the same relationship to pubescence as is the case of the under side - that is the cobwebby hairs while there are more abundant than on the mature leaf.

Petioles and ribs show no stiff setaceous hairs.

No tufts or masses of pubescence or bristles in the axils of the ribs.

Tendrils single - forked in this specimen



V. doaniana

Sample Taken
Sticked

7/8/42
7/10/42

Under side of mature leaf shows a thin - very fine cobwebby white mesh webby, long setaceous hairs that are numerous on the veins and main branches and also the small branches. Looks almost as though tiny spiders had spun a web on these hairs. The white hairy pubescence is appressed along the veins. There is no tufting at axils of the veins either of setaceous hairs or pubescence.

Petiole densely hairy - white appressed except when disturbed by touching. Upper surface of mature leaf thickly pubescent with very fine cobwebby hairs - pubescence more pronounced on the veins. Some short setaceous hairs seen on main veins of upper surface but these not abundant.

Very Hairy

Young growing end of cane densely, white - appressed hairy - hairs extending longitudinally. Same holds for petioles & tendrils.

Under surface of young leaves densely ^{white} felted in inter vein areas but veins decidedly longitudinally white - hairy (like an old man's back).

A cottony - fairly heavy pubescence on upper surface of young leaves - becoming thinner as leaves expand.

Sticky heavy 2-forked tendrils on the specimen.
Young growing tips sticky & heavy.

Dog Ridge

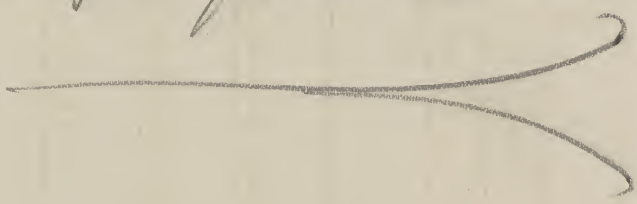
Sample taken 7/6/42
Studied 7/7/42

Under surface of mature leaf shows very sparse tomentose pubescence which is most abundant along the veins and appears occasionally in small aggregates - not prominent. The general appearance of the undersurface of the mature leaf is that of glabrous mem. The petiole shows tomentose, more or less appressed pubescence running lengthwise of it and continuing on the veins at the base of the leaf. It looks as though the petiole and veins carried most of the pubescence. There are no marked accumulations of pubescence at the axils of the veins. No setaceous hairs are noted anywhere.

The upper surface of the mature leaf shows a marked tomentose pubescence at the petiole insertion and tomentose hairs extending out from the veins. Very sparse -

The growing cone tip shows tomentose pubescence extending longitudinally - white - with this material extending out on the petioles of the young leaves. The veins continue the carrying of the tomentose hairs and the interveinal tissue shows considerable coverage of the same, becoming thinner as the leaf grows.

Tendrils simple - forked in this specimen



Eaton

Sample Taken 7/6/42
Shedded 7/8/42

Under surface of mature leaf densely felted with
whitish - becoming brownish pubescent - that on the veins
more or less woolly in appearance. Petiole also woolly felted
the highest at axils of veins and no setaceous hairs seen
anywhere.

Upper surface of mature leaf shows more Laciniosis
which is most marked along the veins. The highest at axils of veins.

Young growing tip shows fairly leavy appressed laciniosely
placed Lacin - becoming more or less woolly (brown) in character
further down the stem. This Laciniosis extends up the petiole
of the young leaves and up onto the veins. Inter-vein space densely
felted with whitish - becoming brownish pubescent, the highest at
axils of veins.

Tendrils of this specimen 2-forked: -



Franklin

Ranunculus 7/6/42
studied 7/7/42

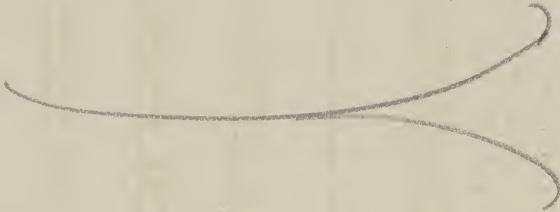
Under surface of mature leaf shows short silky rusty hairs in inter-vein areas, and a little of same on veins. Petalaceous hairs short but abundant along all veins but not tufted in axils. Retracous hairs very abundant on petiole.

Upper surface of mature leaf nearly glabrous except for little rusty pubescence along veins. Petalaceous hairs very few and very small along veins.

Young growing point ^{shows} moderate appressed cottony hairs which extend up onto the petioles of the young leaves. Inter-vein areas show moderate fine pubescence but this thins out rapidly as leaves expand.

Upper surface of young leaves show sparse hairs with fine bristles along the veins.

Tendrils of this specimen single-forked



Wendellmont

Sample taken 7/8/42
Studied 7/11/42

The under surface of the mature leaf shows only scanty woolly lanuginous -
glandular hairs occur in relatively small numbers along the
vein but these close to the interveinal sinuatures. An occasional hair shown
on the smaller side branches of the vein.

Petiole mostly glabrous but few woolly hairs seen particularly at the
insertion at the base of the leaf.

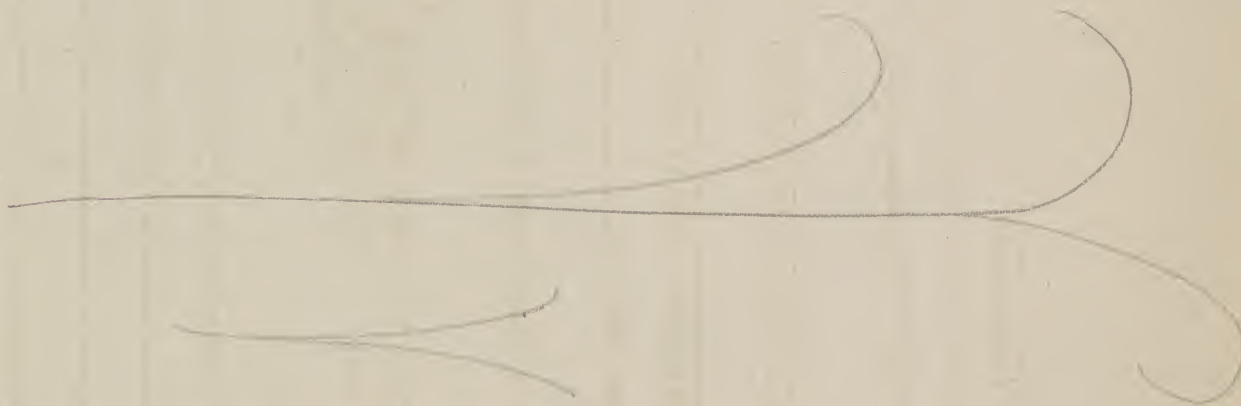
Upper surface of mature leaf almost completely glabrous -
a little wool of pubescence occasionally appearing.

Young leaf rather coarse and almost glabrous - a few
hairs occurring. These more prominent on petiole of young leaves.

Under surface of young leaves shows mostly felt of moderate thickness
over entire surface. Vestiture hairs visible.

Upper surface also pubescent - about like under surface - in young
leaves.

Tendrils singly and 2-forked in this specimen



Lenorei

Rauple Faber 7/6/42
Shedd 7/7/42

Under surface of mature leaf shows thickly distributed cobwebby pubescence with age of leaf becoming more or less trunked rusty scales. Numerous setaceous hairs at apex of the veins and out to some distance on the smaller subdivisions, though not present on the main veins. - absent on internode surface.

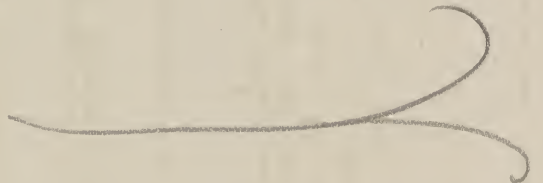
Upper surface of mature leaf glabrous - no setaceous hairs seen.

Young growing point of cane almost completely glabrous - a little cobwebby pubescence goes up the petioles of the small leaves and spreads rather thickly over lower surface - becoming sparser in the older young leaves.

Setaceous hairs at the apex of the veins appear fairly early but confined close to the inter-vein surface rather than on the veins.

A few fine woolly hairs appear on upper surface of small young leaves, disappearing almost completely in larger young leaves.

Tendrils single-jointed



Ludwig

Sample taken 7/6/42

Studied 7/7/42

Considerable cobwebby pubescence over entire internode area of under surface of the mature leaf but not so dense as in the case of *Conradia* and other *Polemoniaceae*. Scanty cobwebby hairs on veins but setaceous hairs fairly abundant on petiole and under surface of veins. No branching of trichomes or pubescence at axils of the veins.

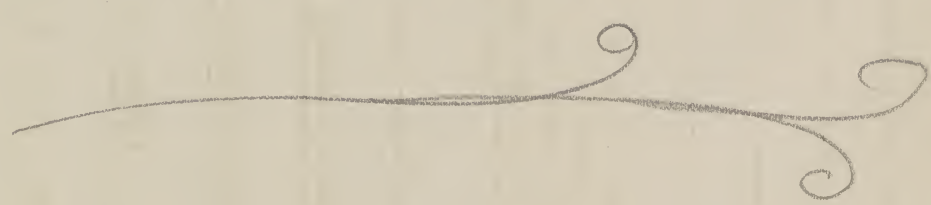
Upper surface of leaf almost completely glabrous - an occasional cobwebby hair. Very short setaceous hairs on the veins.

The young growing tips show scanty longitudinal cobwebby pubescence and the internode areas show a silvery white felted surface. - Pubescence scanty on the veins which stand out in rusty green ridges against the felt of the internode areas.

Upper surface of young leaves show them cobwebby covering.

Setaceous hairs at insertion of petiole and few along petioles but not very abundant.

Tendrils in this specimen 2-forked.



Lowanto

Sample Taken 7/8/42
Shaded 7/10/42


Under surface of mature leaf shows scanty rusty-mottled pubescence more particularly confluent to the veins. Few setaceous hairs present on main veins but not prominent anywhere - no tomentum on web of veins. Petiole ^{mainly} practically glabrous.

Upper surface ^{mainly} glabrous, but very few setaceous hairs present on the reddish ^{veins} a few nicks of pubescence noted along veins.

Young growing point shows very scanty rusty pubescence, the petiole of the young leaves more markedly so and the under surface of the small leaves thickly clothed with pubescence.

Very few setaceous hairs seen and these growing at the margins of the under side especially close to the vein - mostly at axils. Also not show as tufts.

Tendrils reddish single-jointed in the specimen.



V. longii

Samuel Faber 7/8/42
Studied 7/9/42

Under surface of mature leaf almost glabrous but little
obscure woolly pubescence appearing on the veins. Petioles hairs
tufted in axils of veins and more or less generally distributed
on fine venule of the ^{inter-vein} surface. Petiole whitish-woolly
pubescent.

On upper surface of mature leaf whitish woolly-coarsely hairs
more or less generally distributed but most marked along veins
the setaceous hairs noted on upper surface

Young growing portion of cane shows abundant appressed
coarsely-woolly pubescence extending out out to petiole of young leaves
and along veins of the under side. Pubescence light on under inter-vein
area but long setaceous hairs occur generally over these areas
even on quite young leaves. Tufted at axils veins also

Upper surface of young leaves show coarsely hairs generally
though not excessively heavy

Tendrils silky-fuzzed in this specimen

Laretto

Sample taken 7/6/42
Studied 7/7/42

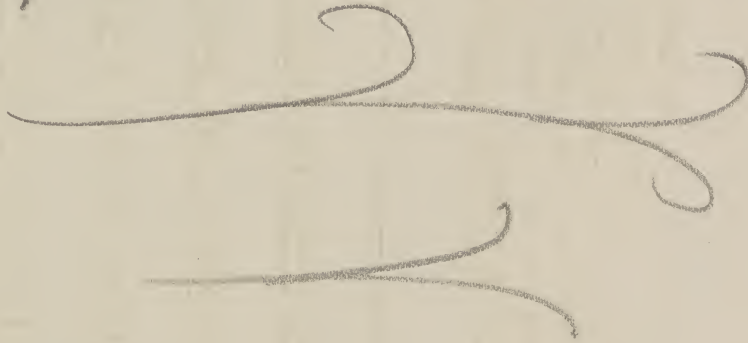
Pubescence very thin on under surface of mature leaf
cotyledon in character - becoming rusty in color. Not prominent
on veins or petiole. Very few setaceous hairs on axis of
veins - more noticeable at divergence of main veins at insertion
of petiole

Upper surface of mature leaf almost completely glabrous - few
hairs (cotyledon) along veins.

Except at very tip of young primary cane pubescence very
slight. Light on young petioles. Thin - cotyledon over entire under
surface of young leaves

Pilosity hairs not observed on young leaves

Trichoblasts single-forked also double-forked -
single-forked at adjacent nodes.



Louisiana

Sample taken July 8/42
Studied July 10/42

Under surface of main leaf shows the veins densely covered with
reticulate hairs and these also occur on the smaller branches in
the intervein areas, there is also scanty wooly pubescence

Petiole of ~~leaf~~ ^{or leaflet} or nearly so

No hairy pubescence on upper surface except along main
veins where reticulate hairs are found and a few wisps of
woolly hairs

Small growing point nearly glabrous. Light lanugin of the
petioles of the young leaves and light cobwebby pubescence on
under side, Some tufts of reticulate hairs at ends of small
leaves

Upper surface of small leaves show little wooly brownish pubescence but
no reticulate hairs noted.

Tendrils single - and 2-forked in the specimen

long & wavy

Lutei

Sample taken 7/6/42

Sticked

7/8/42

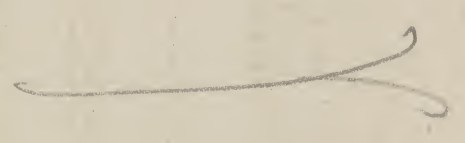
Under side of mature leaf covered with dense mat of pubescence, that on the veins woolly in appearance though brown, - the whole takes on the buff or brownish color. Petiole also pubescent. No tufts at axils of veins and no setaceous hairs seen anywhere.

Upper surface of the mature leaf glabrous except along veins where a little of the woolly or wooly hairiness persists.

Young growing tip shows pronounced appressed laniculae extending longitudinally and up the petiole of the young leaves up to the veins. Intervenial spaces densely felted with whitened - becoming slightly buff pubescence. Pubescence along the veins of main axis brownish. Older portions of the growing tip woolly brownish pubescent.

Upper surface of young leaves show some hairiness

Tendrils of this specimen single-jointed



Moore

Sample taken 7/6/42
Studied 7/7/42

Inter-vein areas on the under side of the mature leaf
has a dense mat of pubescence. On the veins lying longitudinally
and gradually becoming rusty or brownish in color. No axillary tufts
No citaceous hairs anywhere

Scanty cobwebby pubescence on upper surface - most marked along
or near the veins

Young growing point shows moderately abundant appressed longitudinal
hairs extending out on petioles and veins. Felt mat dense on inter-
vein surfaces - white - becoming almost coppery
No retaceous hairs anywhere

Upper surface of young leaves show scanty cobwebby pubescence
appearing to submerge at or near the veins - for the most part
extending - basally - distally on the leaf

Tendrils slightly forked in the specimens

2

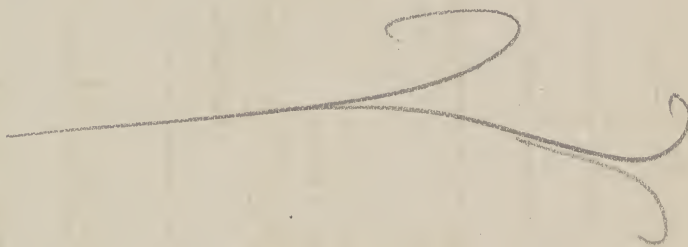
Mueen

Sample taken 7/6/42
studied 7/7/42

Under surface of mature leaf almost completely glabrous -
only an occasional cobweb showing anywhere. A small, dense, prostrate
tuft of setaceous hairs in axils of veins. Stomata prominent
Upper surface also nearly completely glabrous. No other noteworthy
surface features.

Young growing tip nearly glabrous. Thin felt on under surface
of young leaves - becoming very thin as leaves expand.
No setaceous hairs noted in case of young leaves.

Tendrils of the specimen 2-forked: -



Hersho

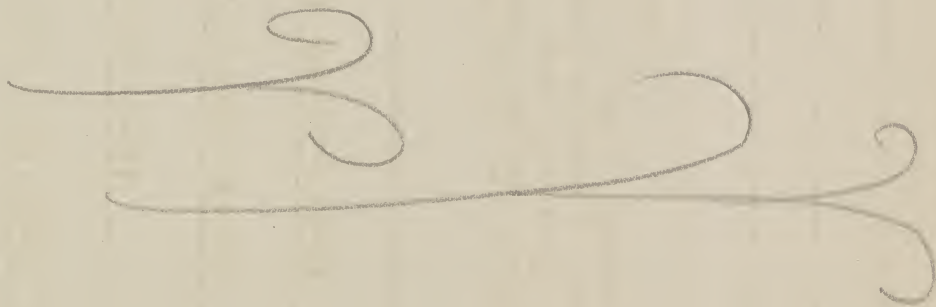
Sample Taken 7/6/42
Studied 7/7/42

Internode areas on under surface ^{of machine bag} nearly glabrous - with occasionally a small rosette thread of hair. Veins show dense growth of reticulate hairs - very prominent and particularly dense at angles of divergence of vein branches. Present but less in number on the petiole.

Upper surface of machine bag glabrous except along the veins where there are a few coarsely hairs and reticulate ones. These reticulate hairs on veins is outstanding!

The young growing point shows scanty coarsely pubescent - not quite but nearly glabrous. The petioles and under surface of the small leaves are quite hairy with rosette - coarsely pubescent. Axillary tufts are prominent on the under side of young leaves while the internode areas become nearly glabrous. Reticulate hairs are prominent on quite young leaves.

Tendrils single and also 2-forked



Thajara

Sample taken 7/6/42
Studied 7/7/42

Moderately heavy peltate pubescence on internode areas on under side of mature leaf. Coarsely hairs longitudinally along the veins - becoming rusty in color. Some appressed to petiole of leaf but pubescence becomes more or less ruffled by gusts.

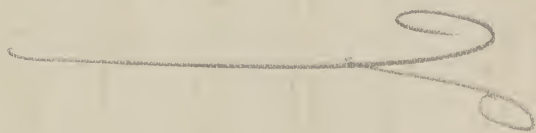
No setaceous hairs seen on under side of leaf or petiole. No tufts in axils of veins. Sparse appressed hairs on upper side of leaf most prominent along veins.

The young growing tip shows considerable amount of tomentum coarsely hairs appressed on the surface - extending up petiole of young leaves and ^{on under side} veins. Petiole surfaces show fairly dense felt mat, very dense in youngest leaves but thinning out to moderately heavy in older leaves.

On upper surface of young leaves there is a uniform thin network of coarsely hairs.

No setaceous hairs observed anywhere.

Tendrils of this specimen single-furcated



Wach

Sample taken 7/6/42
Studied 7/7/42

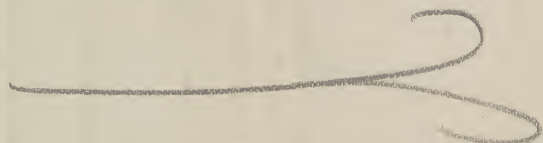
Moderate slightly rusty felty pubescence over internode areas on under side of mature leaf. Scanty to moderately abundant cobwebby hairs on veins. Petalose hairs in abundance along veins and on petiole. No tufts in axils of veins noted.

Upper surface of mature leaf almost completely glabrous - an occasional cobwebby hair showing on veins. Short setaceous hairs on veins.

Young growing tip shows moderate cobwebby pubescence lying longitudinally along the growing stem. Scanty to moderate in amount along petioles of young leaves diverging at base of leaf along veins of under side. Internode areas in very young leaves densely felted - becoming much thinner as leaves expand.

Petalose hairs not visible on under side of young leaves. Upper surface of young leaves very thickly pubescent with cobwebby hairs most abundant along veins. No setaceous noted on upper side of veins.

Three drils single-furled in this specimen



Portland

Sample taken 7/6/42
Studied 7/5/42

Under surface of mature leaf shows rather dense felt mat of very fine cobwebby hairs. Pubescence also fairly abundant on surface of leaf - whitish - becoming brownish or rusty.

No tufting at apex of veins and no setaceous hairs observed.

Upper surface almost completely glabrous in mature leaf except for occasional strong tufts on single hairs.

Young growing tip moderately pubescent the very young petioles showing longitudinal appressed hairs extending to veins. Inter-vein areas densely felt matted - white but later becoming rusty or browned on under side of leaves.

Upper side of young leaves thickly pubescent with cobwebby hairs becoming thinner as leaf expands. Larger young leaves appear somewhat hairy due to apposition of hairs.

No tendrils on this specimen

V. flaviviridis

Sample taken 7/8/42

Stichell 7/10/42

of mature leaf

Upper surface, free or at least mostly free of pubescence but there are long setaceous hairs all over the main veins and scattered about over intervein areas on the small veins. These setaceous hairs longer than observed on any other species. Petiole equipped with setaceous hairs but these most abundant at insertion at base of leaf.

Little hairy pubescence on upper surface of mature leaf but the ~~long~~ setaceous hairs are abundant on the veins.

Young growing point - almost completely glabrous as well as the petioles of the young leaves.

Tufting of hairs at axils of veins in young leaves on under side and in the case of the very young leaves a very scanty woolly pubescence is noted.

Setaceous hairs prominent on veins of under side of young leaves but not seen on upper surface.

Tendrils single forked



Queller

Sample taken 7/6/42
studied 7/7/42

Under surface of the mature leaf with very scanty scabrous pubescence - almost glabrous. But abundant fine setaceous hairs line the veins and their subdivisions. Tufts of setaceous hairs at the axils of the veins. Petiole also covered with fine setaceous hairs with little other pubescence.

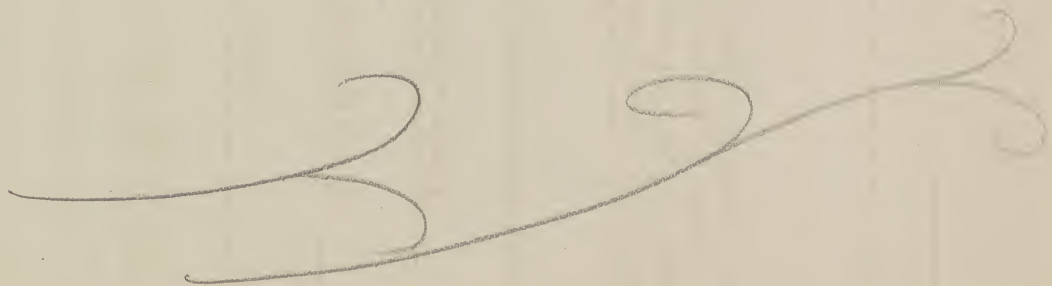
Upper surface of mature leaf ^{completely} nearly glabrous but about fine setaceous hairs occur along the veins.

Young growing point nearly glabrous, but with small amount of long appressed pubescence which is heavier on the petioles of the young leaves & their veins. Moderate amount of purplish or violet colored felt on winter run areas of under side.

Tufting in axillary region and appearance of setaceous hairs appear early in young leaves. Pubescence then rest as hairs expand.

Upper surface of young leaves nearly glabrous - setaceous hairs appearing early along veins.

Tendrils single - & 2-forked on this specimen:



V. vulpina (Vigani Michx)

Sample taken 7/8/42
Studied 7/11/42

All leaves thin. Petiole has almost completely glabrous on under side but with tufting of pubescence and of setaceous hairs at the axils of the veins - prominent. Some fine setaceous hairs along veins but not very abundant. Condition of the petiole like that of the veins.

Upper surface glabrous but showing some very fine short setaceous hairs along veins.

Young growing tips completely glabrous but petiole of young leaves show some setaceous hairs. The tufting of these at the axils of the veins is prominent and distinctive. A few bristles occur on branchlets.

The upper surface of the youngest leaves shows few very fine woolly strands. Retuse hairs on veins of young leaves on upper surface.

Thin leaves and a general glabrous appearance seem to separate this species from all others so far examined.

#7/12

Samuel F. Allen 7/8/42
Shedid 7/11/42

Under surface of mature leaf densely woolly pubescent
and abundant reticulate hairs along veins and pointed to broad
apex on mature branchlets - generally distributed


Petiole mostly glabrous

Upper surface mostly glabrous but reticulate hairs show along the
veins with an occasional fine pubescent hair

Young growing tip mostly glabrous but pubescent of young leaves
and their lower surface show considerable woolly hairs on both
upper and lower surfaces. This turns out as the leaves expand

Color of stem reddish

Tendrils single-jointed



Grass Leaves for Research (Series of 10 from 1 case
1972

Species

~~Aestivatus~~
Bourguigniana: { ~~Luxin~~ } ✓
 { ~~Merckmann~~ }
champini: (~~Dog Ridge~~) ✓
~~Lobelia~~: { ~~Concord~~ } ✓
 { ~~Sutton~~ } ✓
 { ~~Lutea~~ } ✓
 { ~~Worce~~ } ✓
 { ~~Portland~~ } ✓
 { ~~Champlain~~ } ✓
Linacumii: (~~Necker~~) ✓
Reparia: (~~Franklin~~) ✓

Hybrids etc

Champ. Lab.: { ~~Champlain~~ } ✓
Lab. Bour.: { ~~Cochise~~ } ✓
Lab. Lin.: { ~~Agassiz~~ } ✓
 { ~~Catamba~~ } ✓
 { ~~Lindley~~ } ✓
 { ~~Theresa~~ } ✓
Line. Bour.: { ~~Melrose~~ } ✓
Line. Lab.: { ~~Beacon~~ } ✓
 { ~~Louette~~ } ✓
Rep. Lab. { ~~Worce~~ } ✓
 { ~~Sutton~~ } ✓
Lab. Lin. Aest.: { ~~Beacon~~ } ✓
Lab. Lin. Bour. { ~~Delaware~~ } ✓
Line. Rep. Lab. { ~~Champlain~~ } ✓

Agai-am



Clg anam

#1 0x10

6/19/12



Algammam

#2 ok 10

6/19/42



Alnus

#3 0x10

6/19/42



Agave

#4 0x10

6/19/42



Clamam

#5 0x10

6/19/42

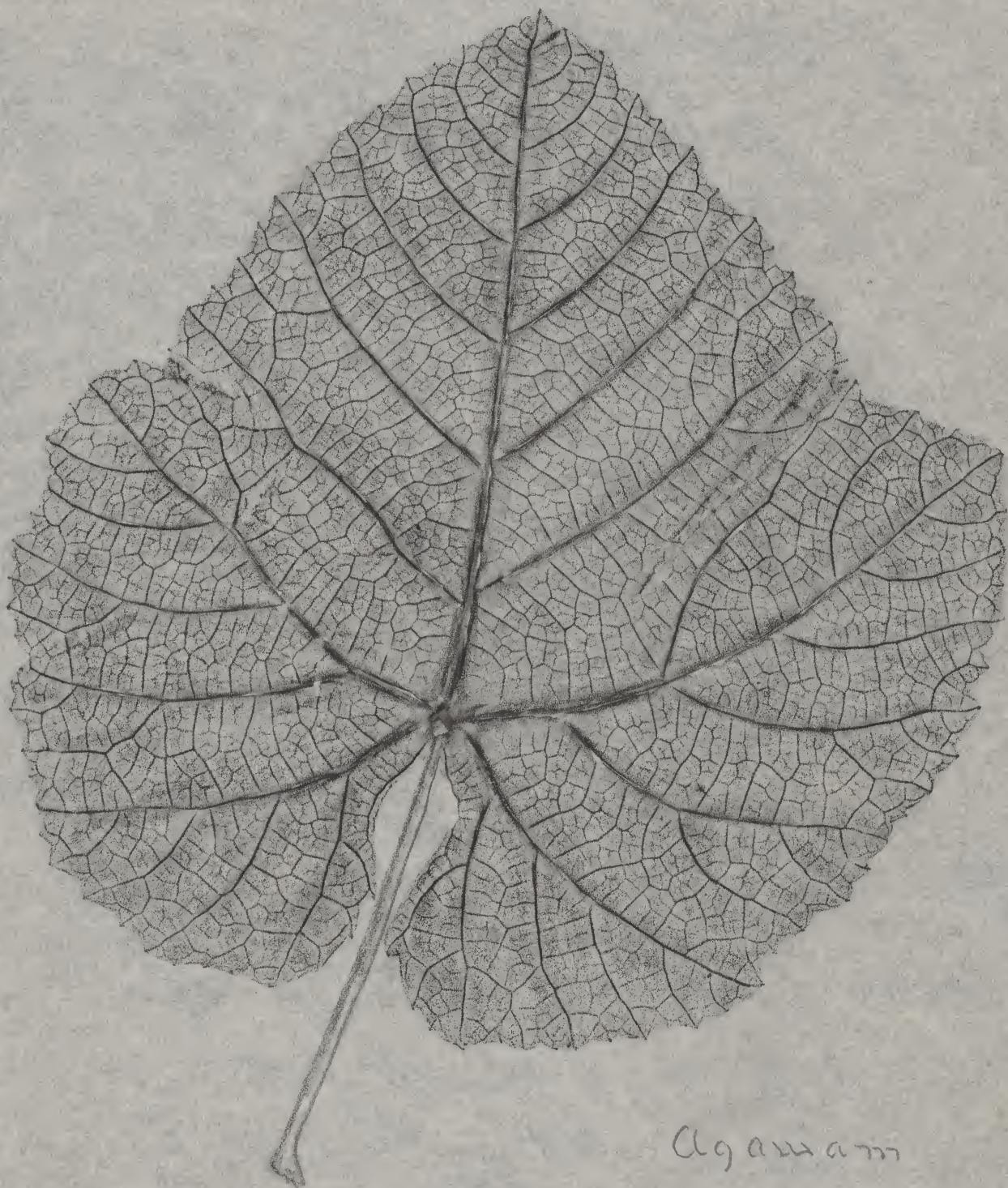




Agave am

#7 0x10

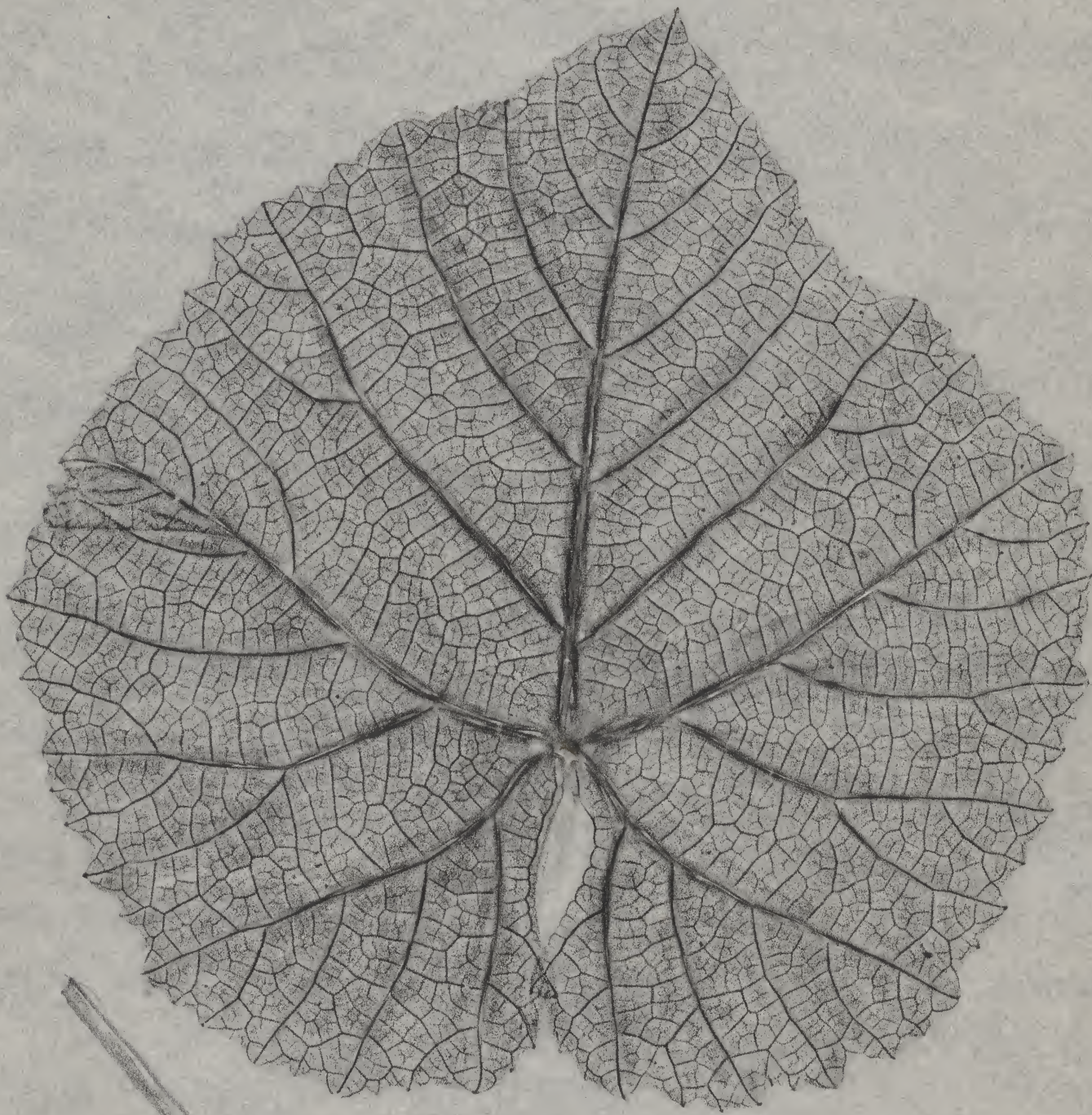
6/19/42



Algonquin

#8 0x10

6/19/42



Algarum

#9.0x10

6/19/42



Alga wam

#10 0x10

6/19/42

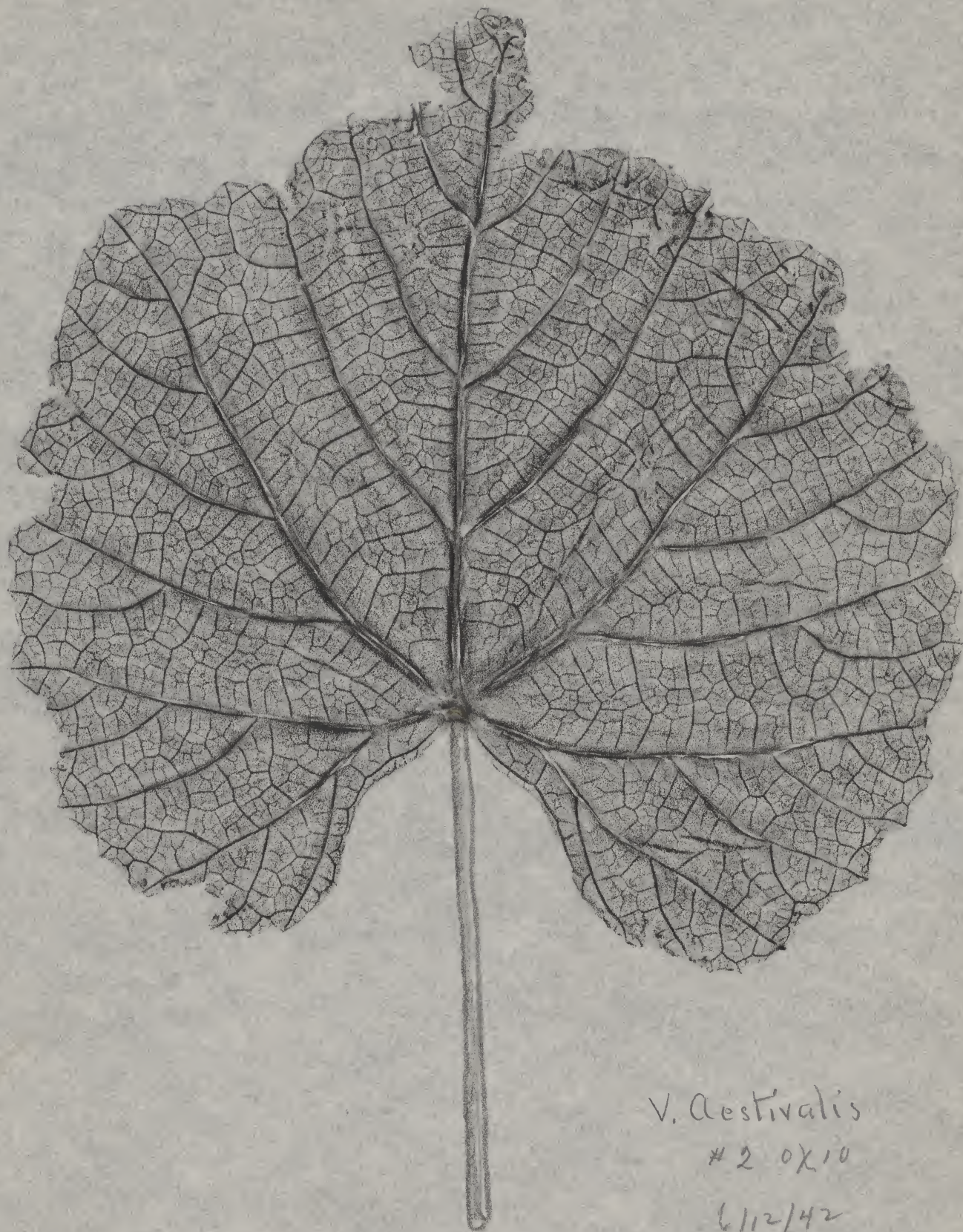
Australis



V. aestivalis

#1 0x10

6/12/42



V. Aestivalis

#2 0x10

6/12/42



V. aestivalis

#3 0x 10

6/12/42



V. cestivalis

#4 of 10

6/12/42



V. Aestivalis

50x 10

6/12/42



V. clevelandii

H 6 0x 10

6/12/42



V. clestivalis

#7, 6x10

6/12/42



V. aestivalis

6/12/42

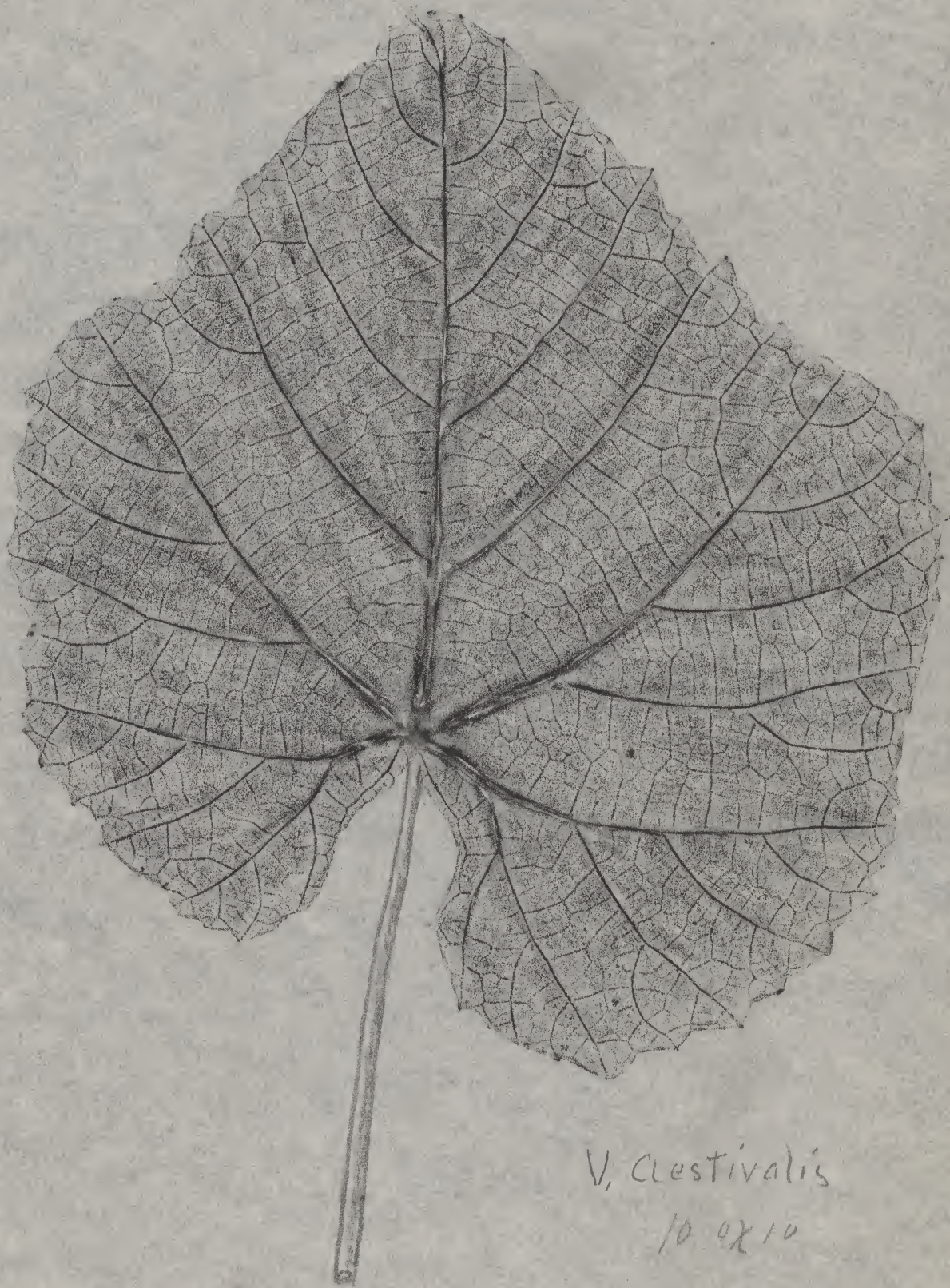
" 8 5x10



V. Aestivalis

* 9 x 10

6/12/42



V. clevelandia

10. 0x10

4/12/42

Bracon



Beacon

#1 ex 10

6/15/42



Beacon

#2 ex 10

6/15/42



Beacon

#3 8x10

6/15/42



Beacon
#40X10
6/15/42



Beacon

#5 0x10

6/15/42



Beacon

#6 0210

6/15/42



Beacon

7 of 10

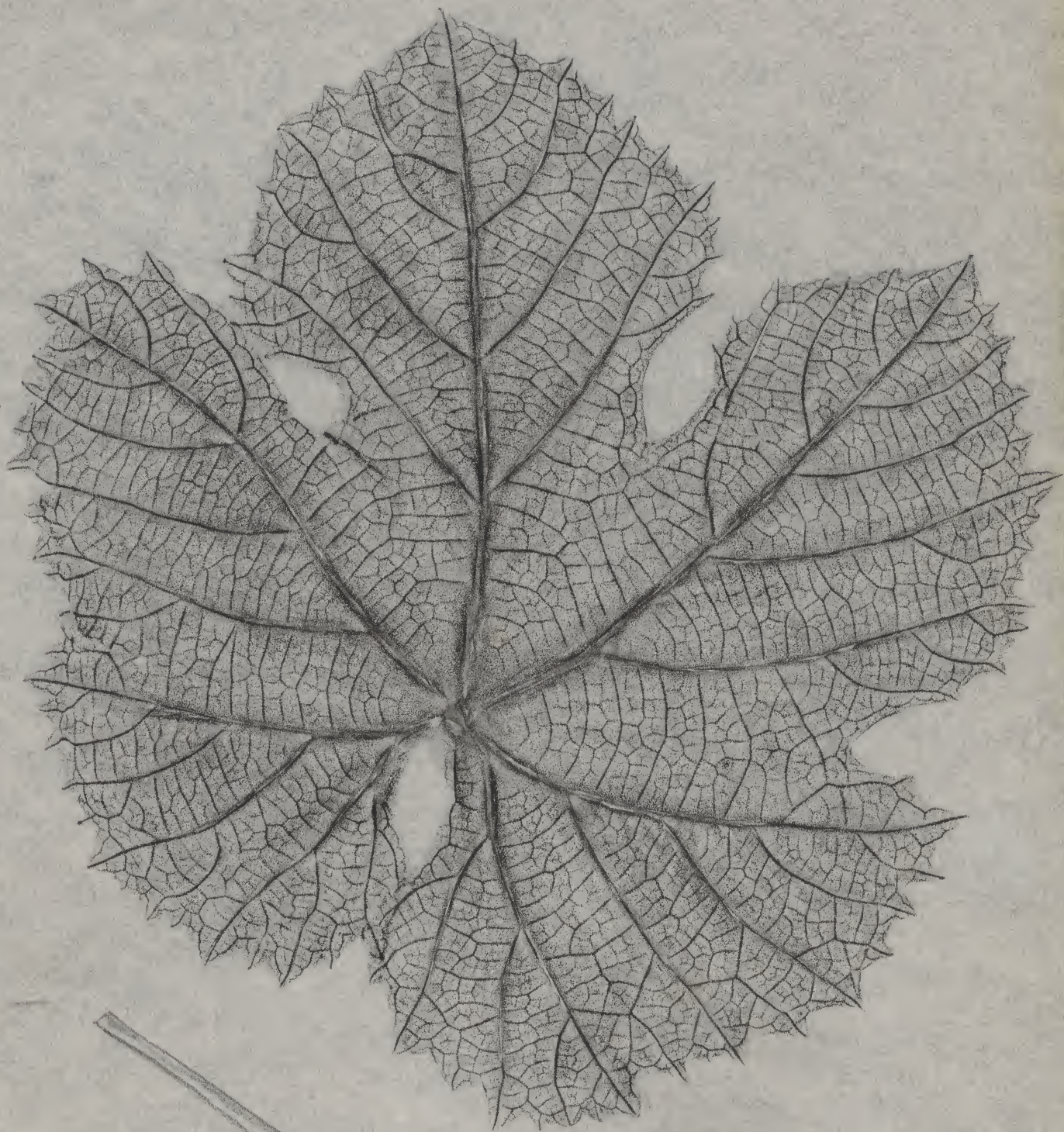
6/15/42



Beacon
#8 0x10
6/15/42



Beacon
#9 0x10
6/15/42



Beacon

10 of 10

6/15/42

Brooklyn



Broetom

#1 0x10

6/22/42



Brocton

#2 0x10

6/22/42



Brocton

#3 0x10

6/22/42



Brooklyn

#4 0x10

6/22/42



Brooklyn

#5 0x10

6/22/42



Brocton

#6 0x10

6/22/42



Brocton

#7 ex 10

6/22/42



Brocton

H 8 0x10

6/22/42



Brocton

#9 0x10

6/22/42

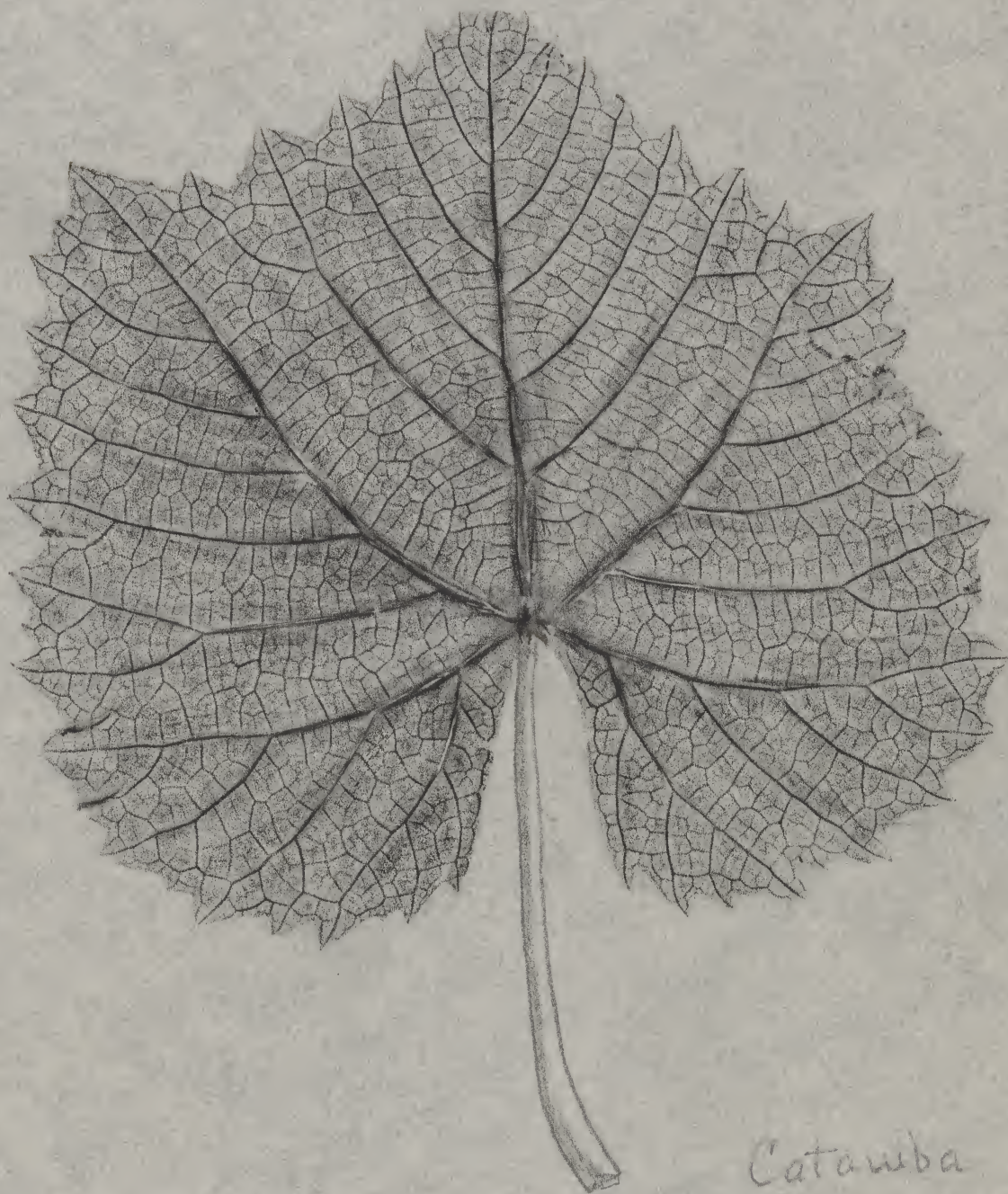


Brocton

#10 ok10

6/22/42

Catara



Catawba

1 0x10

6/16/42



Catamba

* 2 of 10

6/16/42



Catumba

30x10

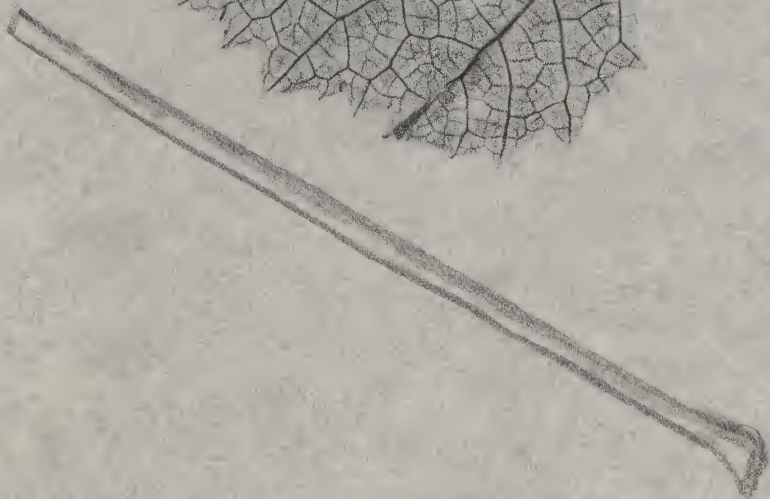
6/16/52



Catawba

#4 of 10

6/16/42



Catawba

#5 ok 10

6/16/42



Catawba

#60210

6/16/42



Catawba

#7 0x10

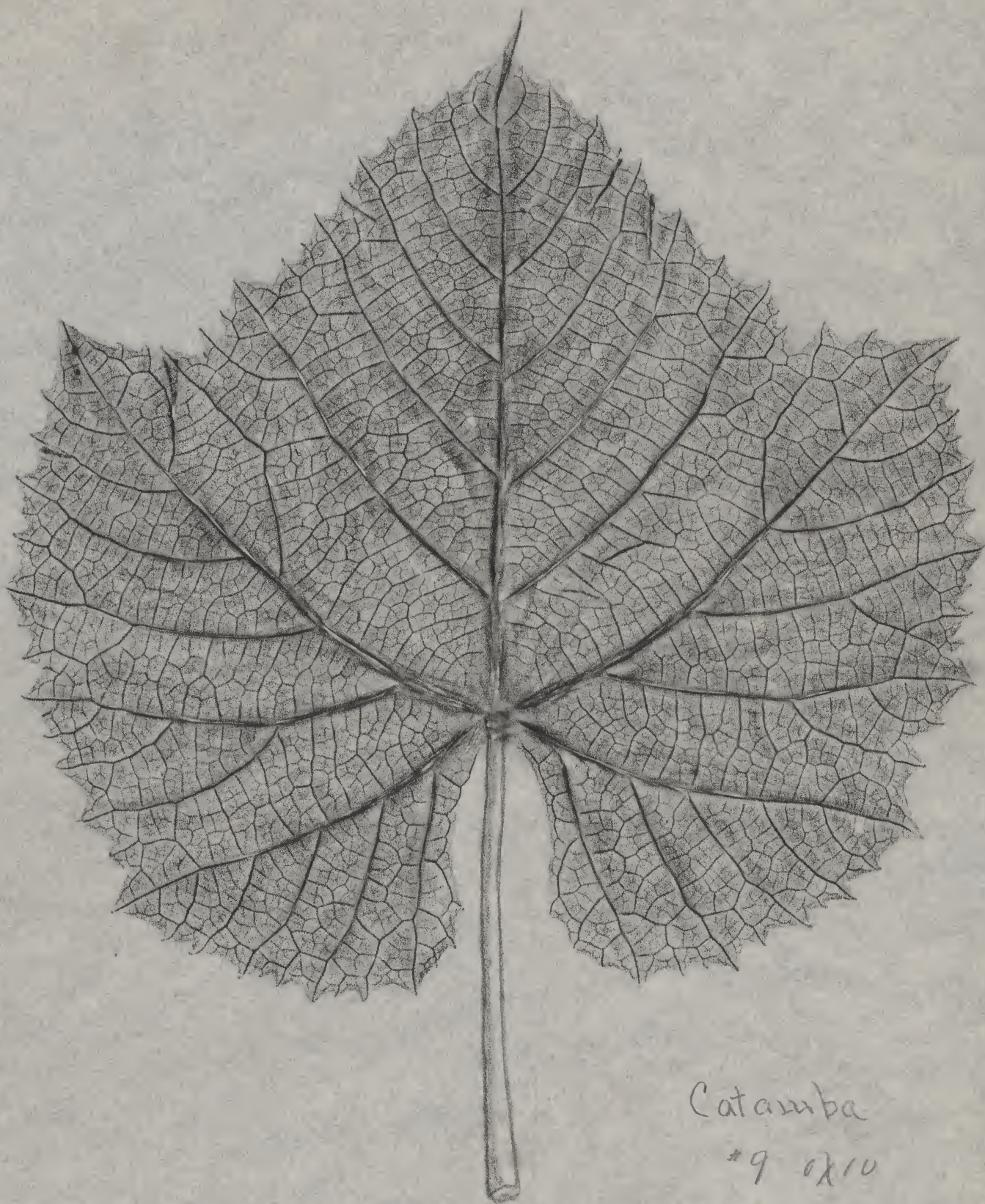
6/16/42



Catumba

8 0x10

6/16/42



Catamba

*9 0x10

6/16/42



Catamba

#10 0x10

6/16/42

Champion



#1



#2

Champanel

of 10

5/30/42

Same Cane



Champanel

#3 0x10

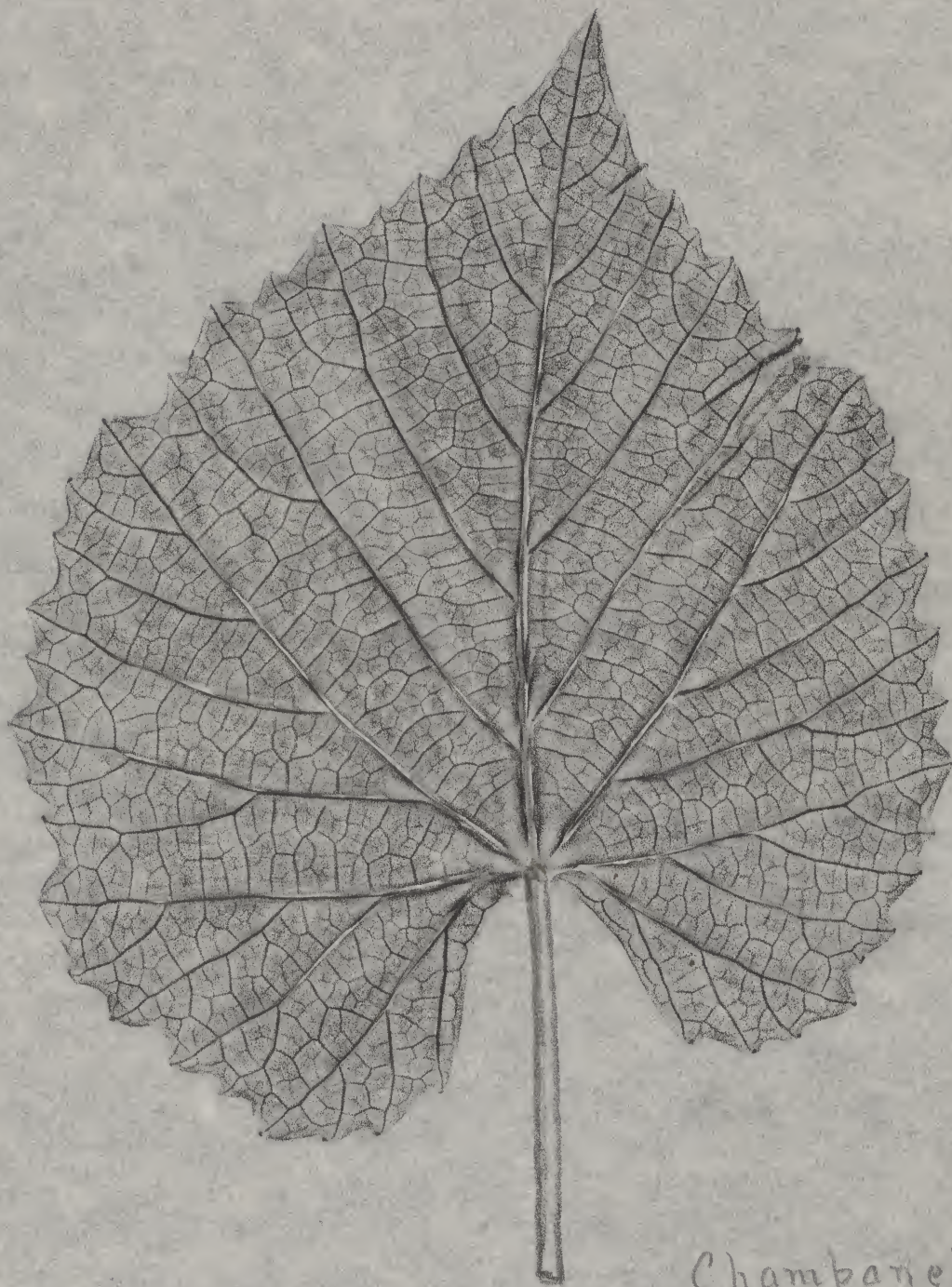
6/1/42



Champanel.

#4 of 10

6/1/42



Champanel

#5 of 10

6/1/42



Champanel

#6 of 10

6/1/42



Champanel

7 of 10

6/1/42



Champanel

8 of 10

6/1/42



H 9



H 10

Champanel

or 10

Champion



Champion

#1 0x10

6/26/42



Champion

#2 OK 10

6/26/42



Champion

#3 0x10

6/26/42



Champion

4 0x10

6/26/42



Champion

#5 0x10

6/26/42



Champion

#6 0x10

6/26/42

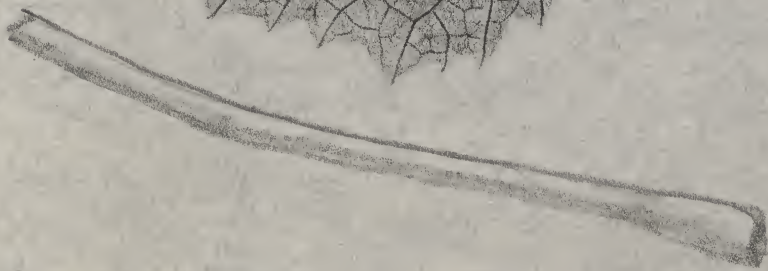




Champion

#8 0x10

6/26/42





Champion

#9 0x 10

6/26/42



Choeta



Cloeta

#1 0x10

6/25/42



Cloeta

#2 0x10

6/25/42



Cloeta

#3 0x10

6/25/42



Cloeta

#4 0x10

6/25/12



Cloeta

#5 6x10

6/25/42



Cloeta

#6 0x10

6/25/42



Cloeta

#7 0x10

6/25/42



Cloeta

#8 0x10

6/25/42



Cloeta

#9 0x10

6/25/42



Cloeta

#10 0710

6/25/42

Cocher



Cochee

#1 ox 10

6/5/42





Cochise

#3 0x10

6/5/42



Coch ee

#4 10x10

6/5/42



Cochee

5 0x10

6/5/42



Cohee
#6 0210

6/5/42



Cochee

#7 0x10

6/5/42



Cochee

#8 ok 10

6/5/42



Cochiee
9 0210
6/5/42



Cochee

#10 ok 10

6/5/42

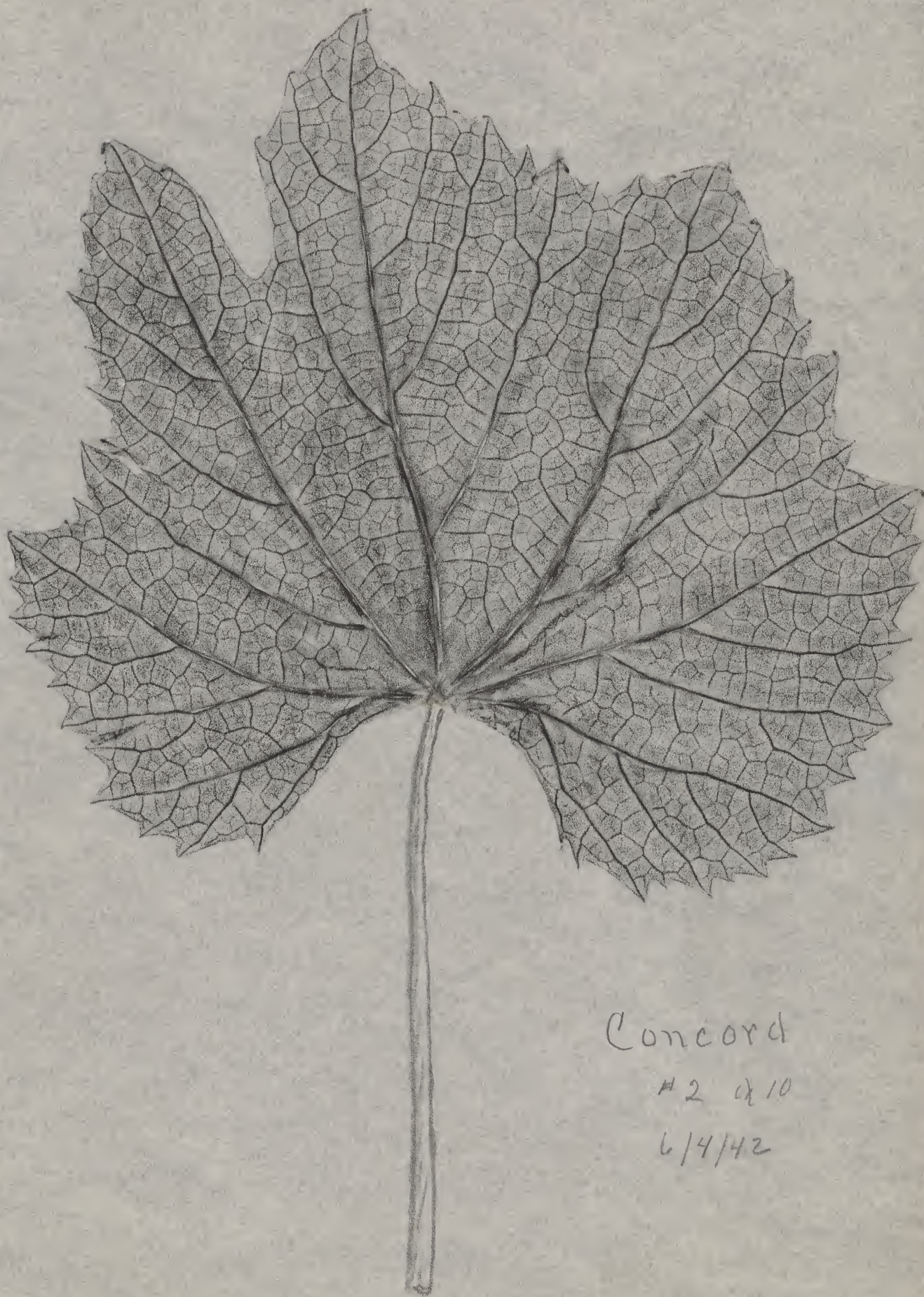
Concord



Concord

#1 0x10

6/4/42



Concord

#2 α 10

6/4/42



Concord

3 ox 10

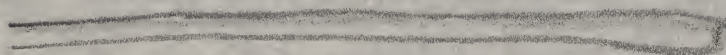
6/4/42



Concord

#4 0210

6/4/42



Concord

#5 or 10

6/4/42



Concord

6 ox 10

6/4/42



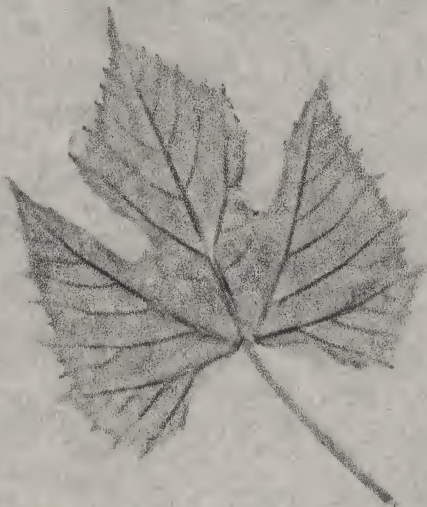
Concord

7 ox 10

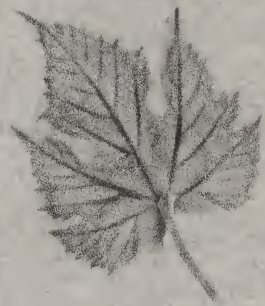
6/4/42



#8



#9



#10 10/10

Concord

6/4/42



Concord

#1 of 10'

10/13/42



Concord

*2 67.10'

7/13/42



Concord
#3 8x10'
7/13/42



Concord
#4 ex 10'

7/13/42



Concord
#5 0x10

7/13/42



Concord
H. G. 0210'

7/13/42



Concord
#7 0x 10'

7/13/42



7/14/42

Concord
48-0210'



Concord
#9 0x10'
4/14/12



Concord

#10 0x10'

7/14/42

Delaware



#1



#2

Delaware

#1-2, 0X10

6/18/42



Delaware

#3 of 10

6/18/42



Delaware

#40X10

6/18/42



Delaware
#5 of 10
6/18/42



Delaware

#6 of 10

6/18/42



Delaware

#7 0x10

6/18/42



Delaware

#8 of 10

6/18/42



Delaware

#9 0x10

6/18/42



Delaware

10 - 0x 10

6/18/42

Dog Ridge



#1



#2

Dog Ridge

OX. 10

6/18/42



Dog Ridge

#3 0x10

6/18/42



Dog Ridge

#40X10

6/18/42



Dog Ridge

#5 0x10

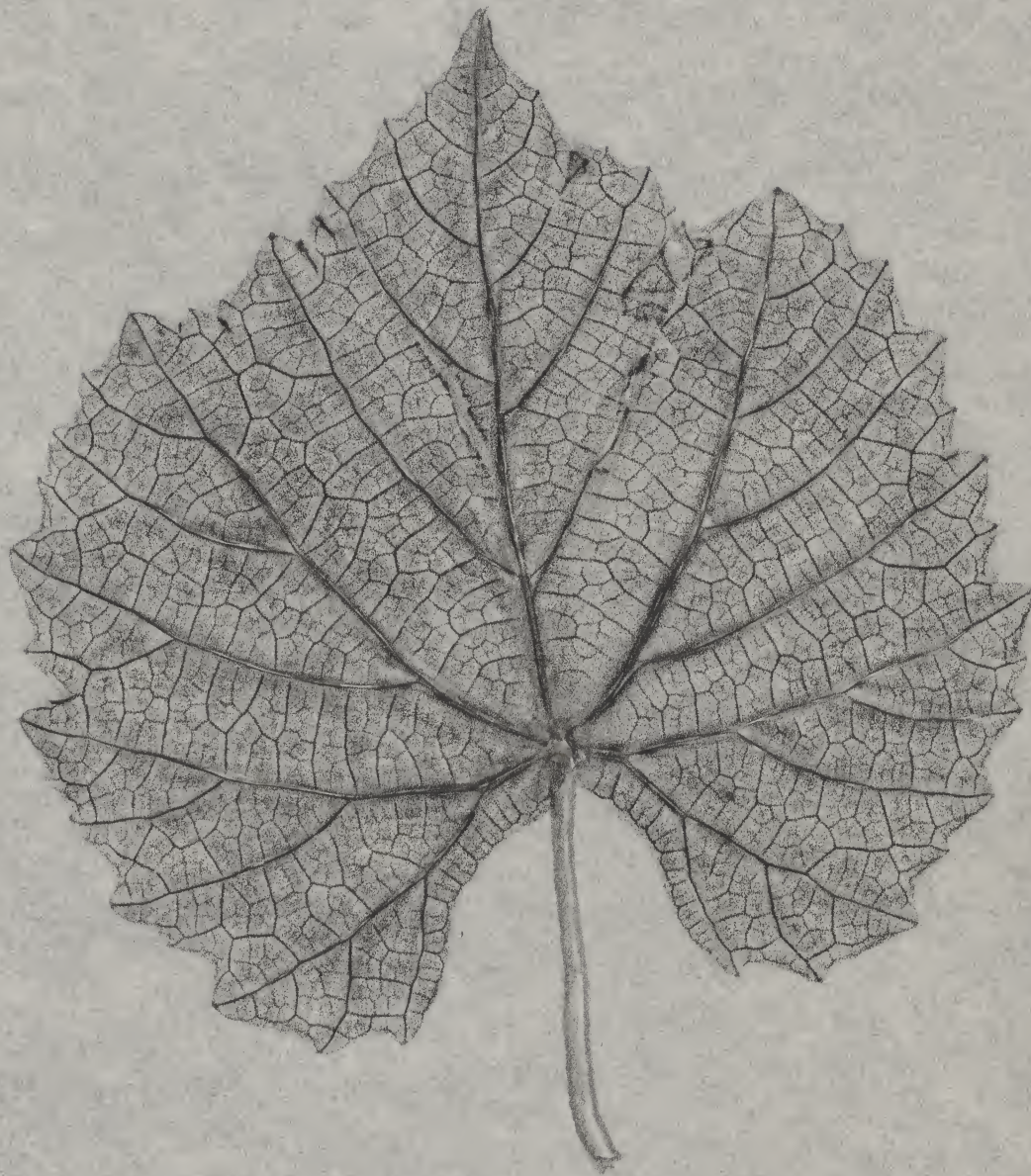
6/18/42



Dog Ridge

60810

6/18/42



Dog Ridge

#7 0x10

6/18/42



Dog Ridge

#8 6X10

6/18/42



Dog Ridge

#9 0x10

6/18/42



Dog Ridge

10 of 10

6/18/12

Eaton



Eaton

#1 0x10

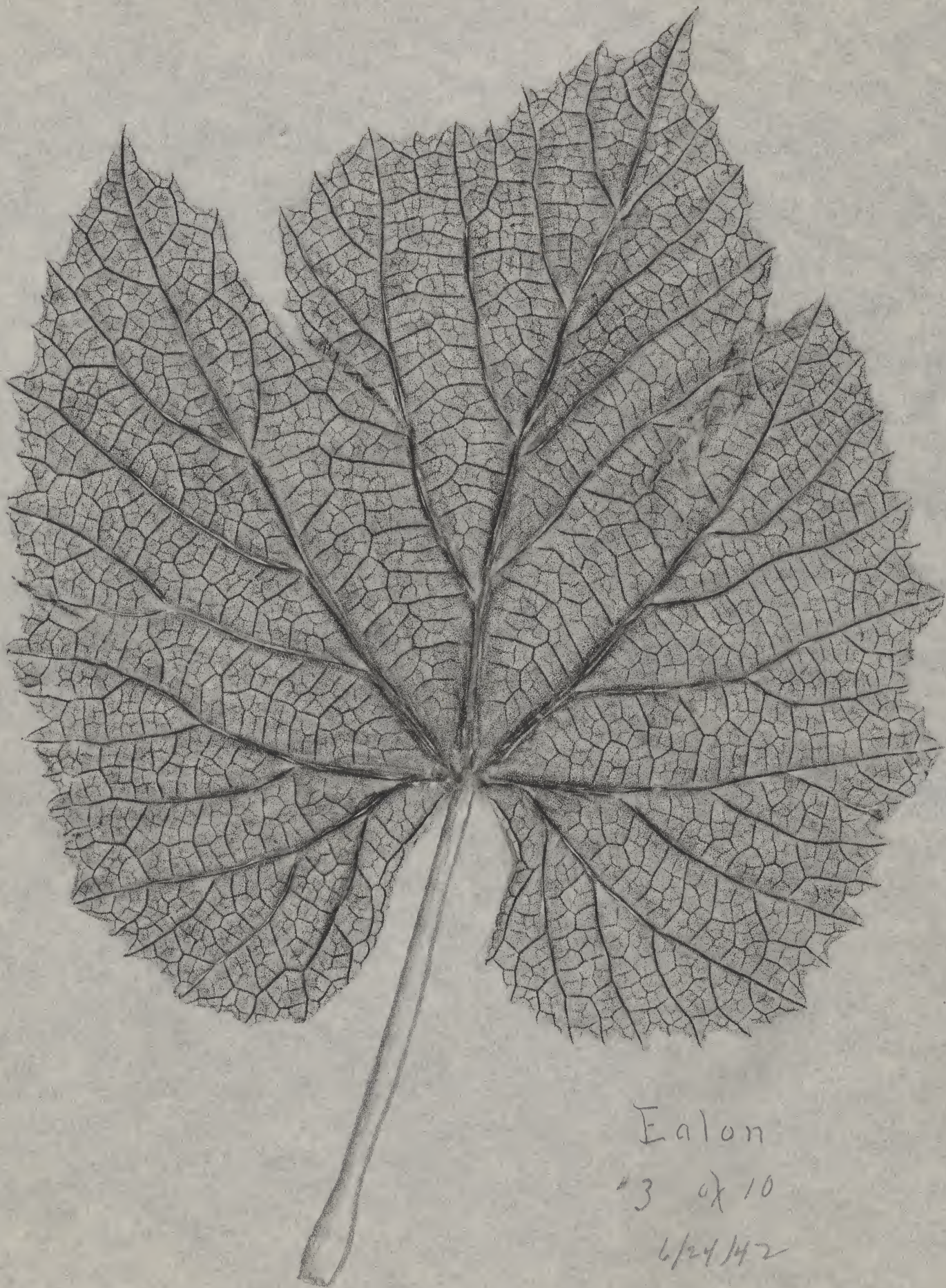
6/24/42



Eaton

"2 0x10

6/24/42



Ealon

'3 0x10

6/24/42



Eaton
#4 0x10
6/24/42



Eaton

#5 0x10

6/24/42



Eaton

#6 0x10

6/24/42



Eaton

#7 0x10

6/24/42



Eaton
#8 ok 10

6/24/42



Eaton

#9 0210

6/24/42



Eaton

#10 0x10

6/24/42

Franklin



Franklin

#1 0x10

6/9/42



Franklin

#2 0x10

6/9/42



Franklin

#3 of 10

6/9/42



Franklin

#4 of 10

6/9/42





Franklin

x 10

6/9/42



Franklin

7 Oct 10

6/9/42



Franklin

#8 08 10

6/9/42



Franklin

#9 0x10

6/9/42

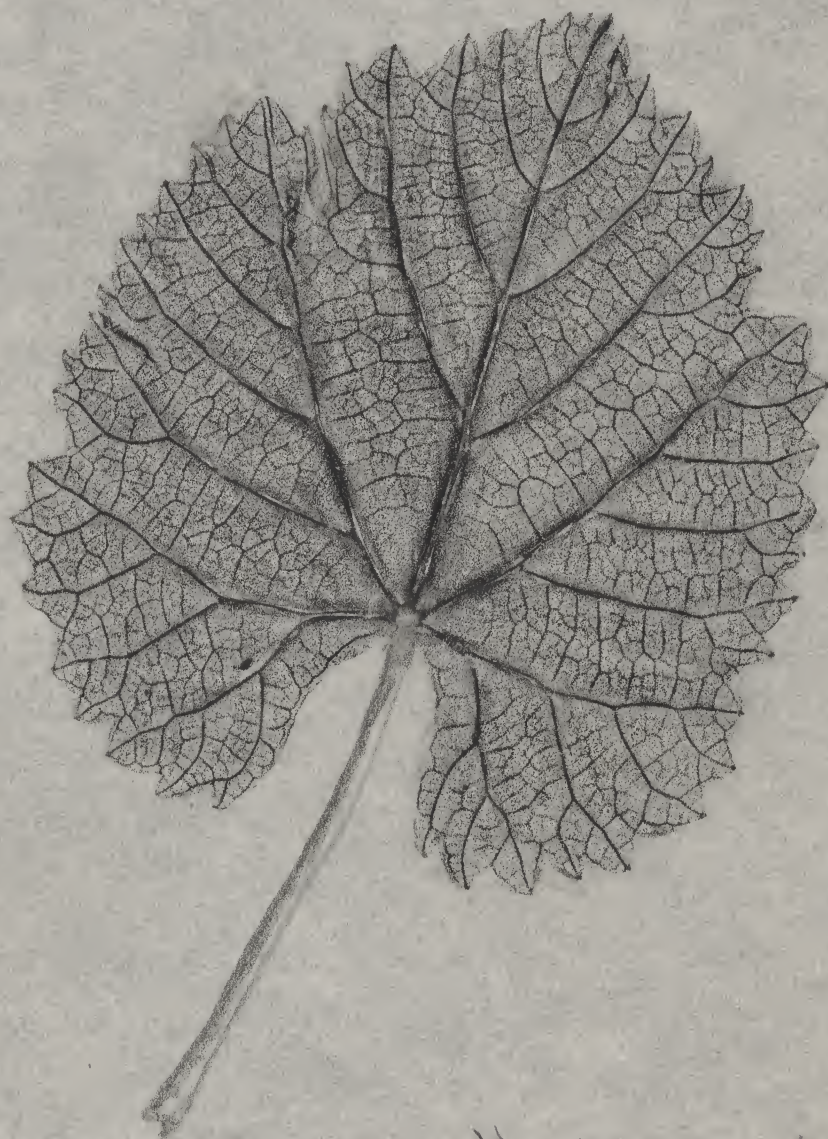


Franklin

#10 ok 10

6/9/42

Herberrmont



Herbermont

#1 ok 10

6/22/42



Herbertmont

#2 0X10

6/22/42



Herbermont

#3.0 x 10

6/22/42



Herbertmont

" 4 0x10

6/22/42



Herbertmont

#5 0x10

6/22/42



Herbermont

#6 0x10

6/22/42



Herbermont

#7 ok 10

6/22/42



Herbermont
#8 0x10
6/22/42



Herbermont

#9 0x10

6/22/42

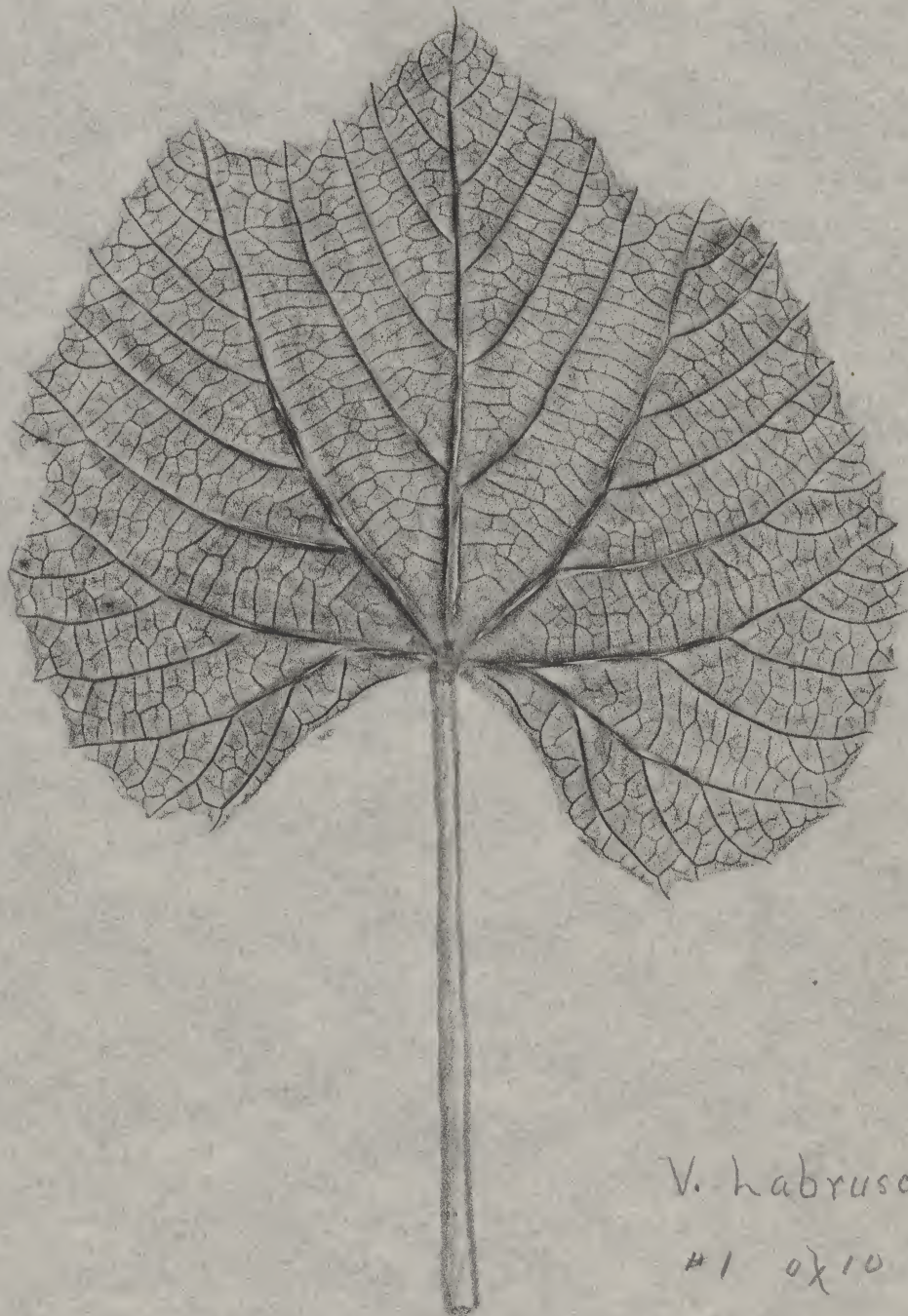


Herbertmont

* 10 0x10

6/22/42

Labrador



V. labrusca

#1 0x10

6/12/42



V. labrusca

#2 0x10

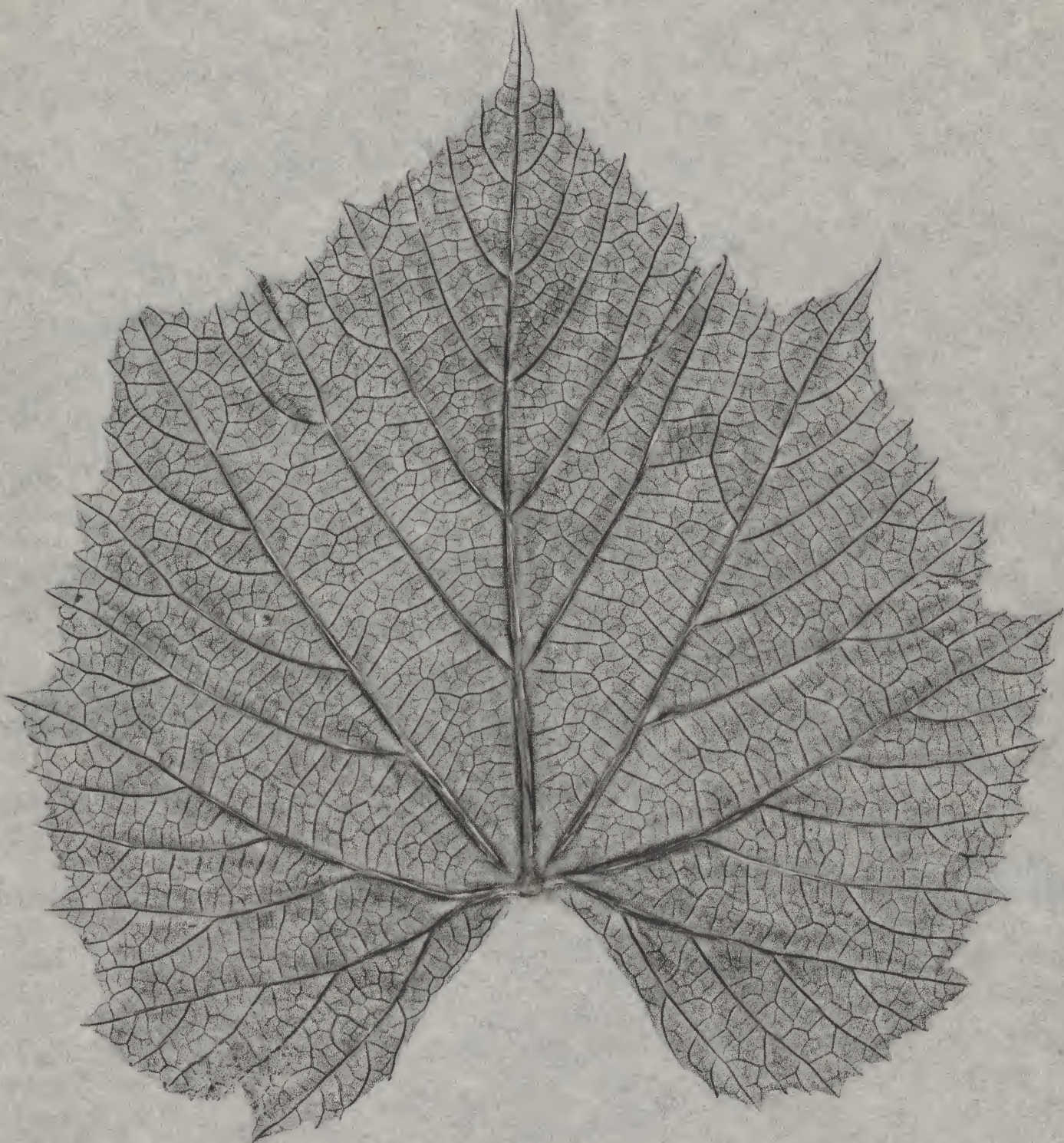
6/12/42



V. Labrusca

#3 9/10

6/12/42



V. labrusca

x 4 0x 10

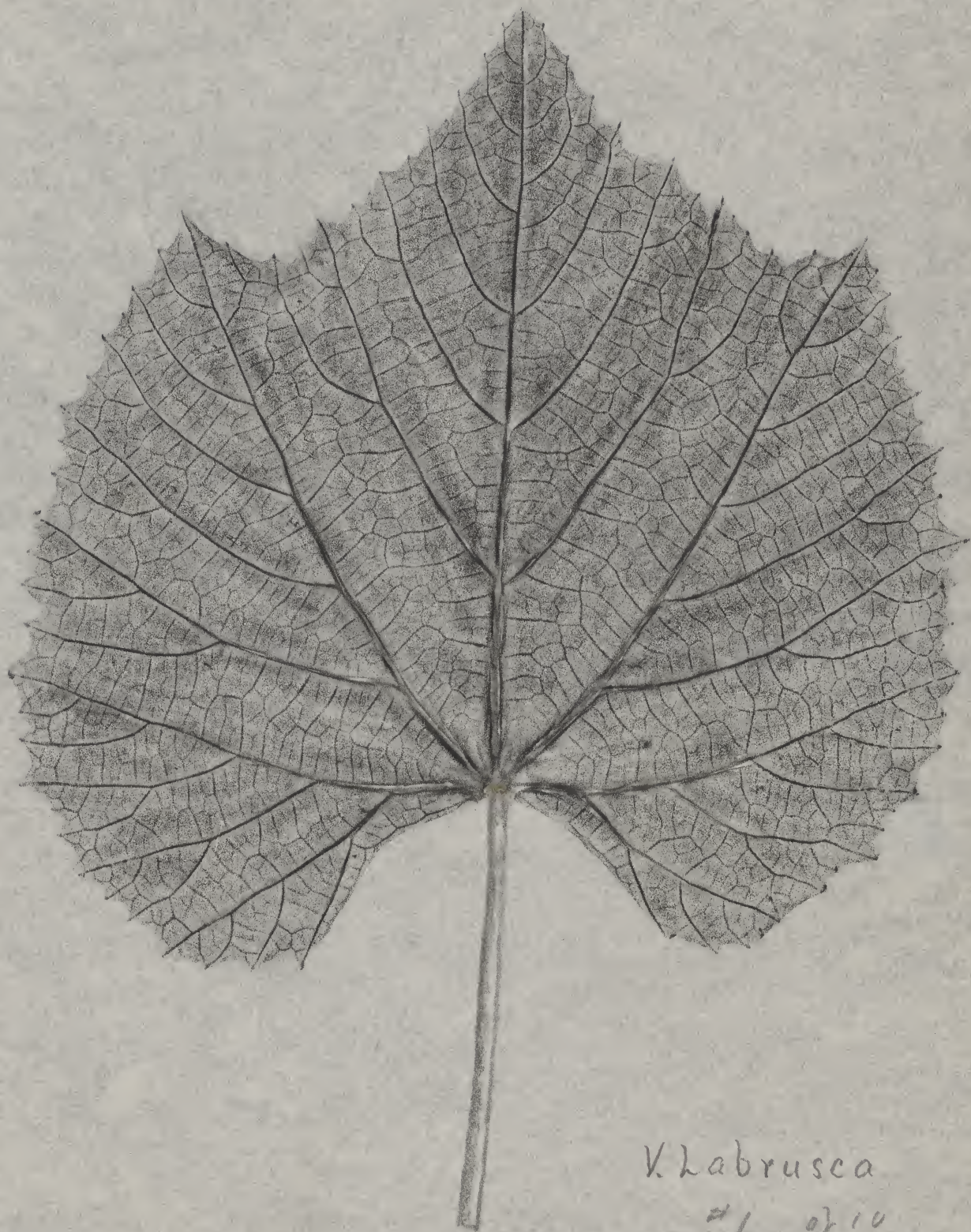
6/12/42



V. laurusea

#5 0x10

6/12/42



V. labrusca

#6 ok 10

6/12/42



V. Labrusca

#7 0210

6/12/42



V. labrusca

#8 of 10

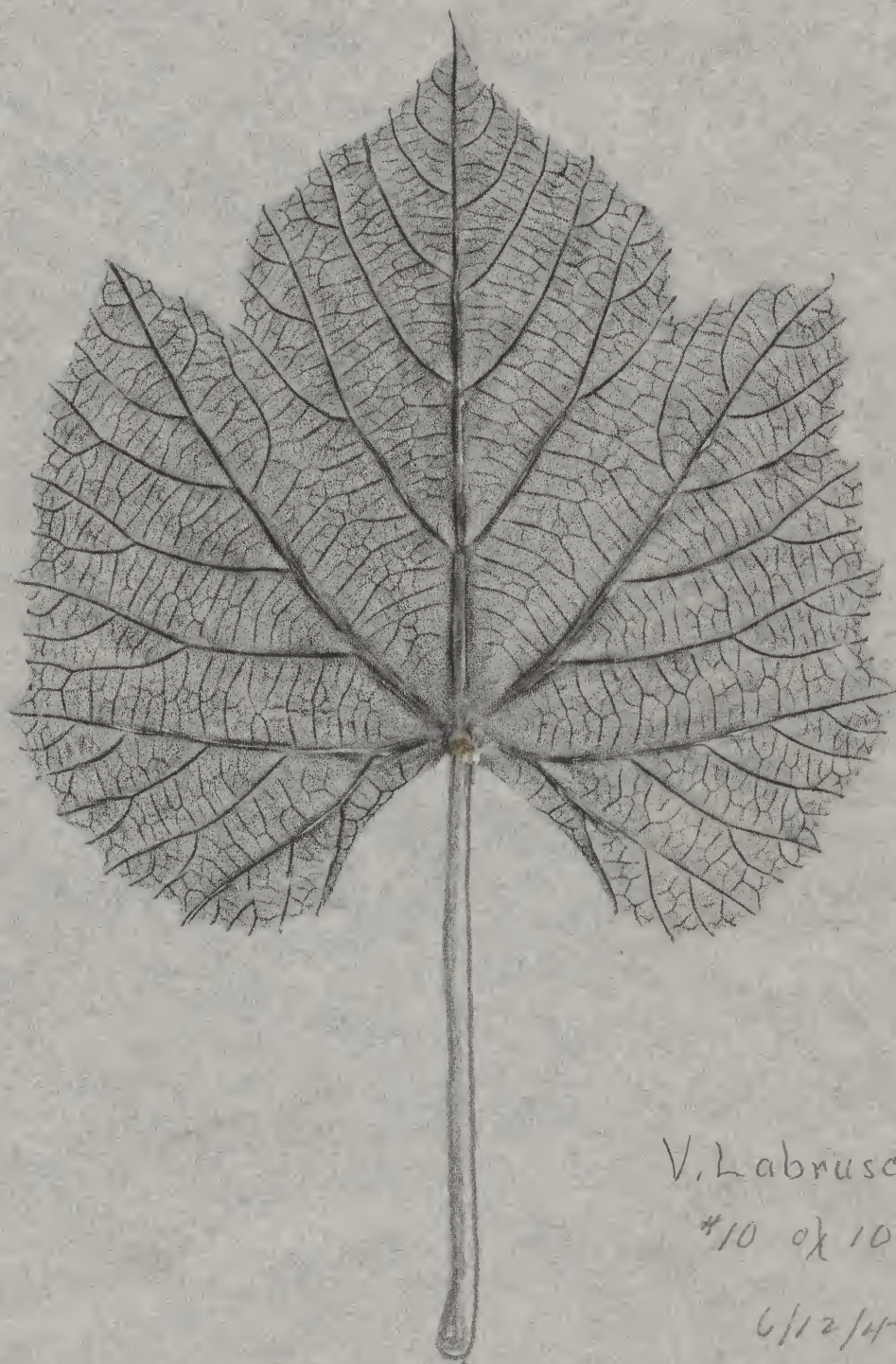
6/12/42



V. labrusca

#9 0x10

6/12/42



V. Labrusca

*10 o \times 10

6/12/42

L'Envoi



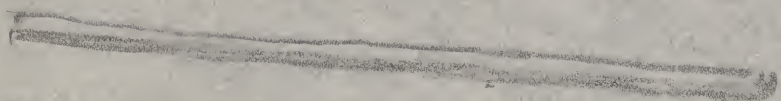
V. bourquiniana

Lenoir

#1

5/30/42

14.10



henoix

2 of 10

5/30/42



Lenoir

#3 7/10

5/30/42



Lenoir

#4 of 10

5/30/42



Lenoir

45 7 10

5/30/42



Lenoir
#6 of 10
5/30/42



Lenoir
#7 of 10

5/30/42



Lenoir
8 of 10

5/30/42



Lenoir

#9 of 10

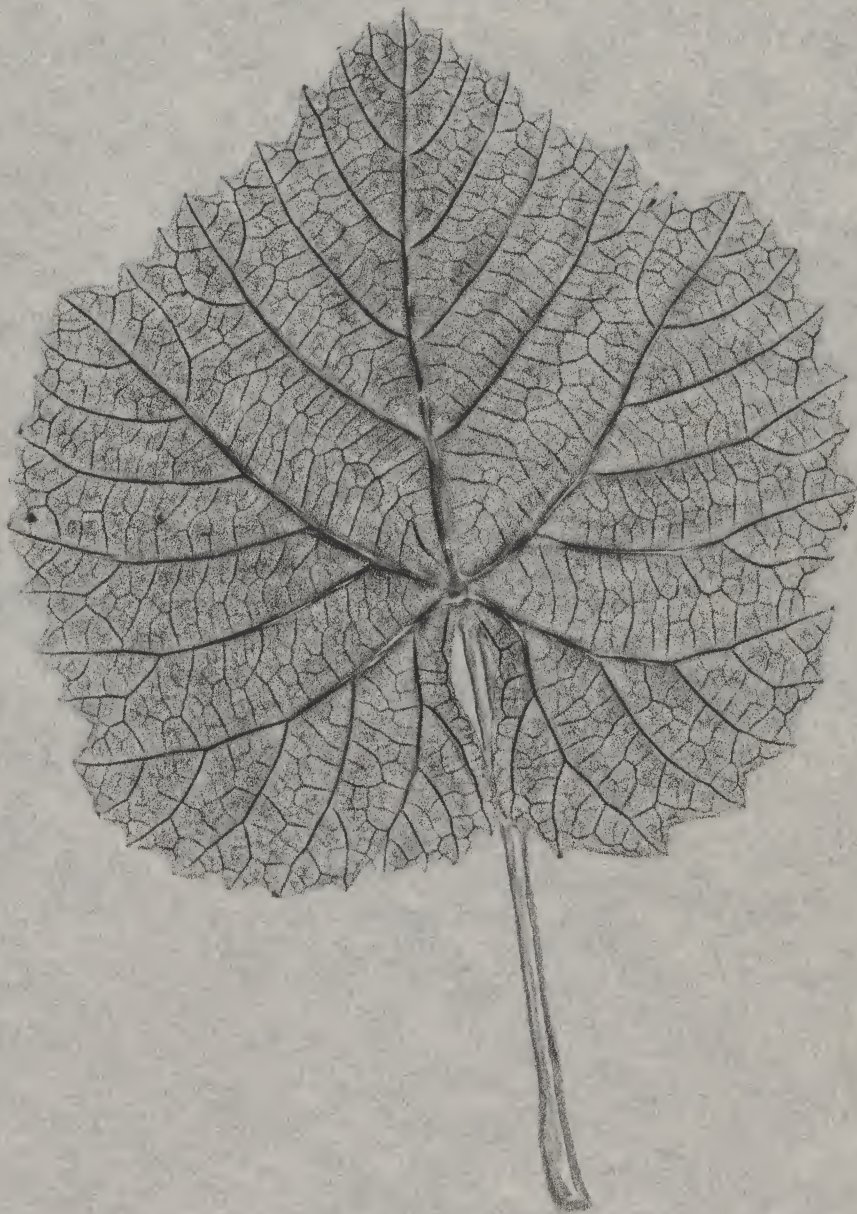
5/30/42



Lenoir
#10 of 10

5/30/42

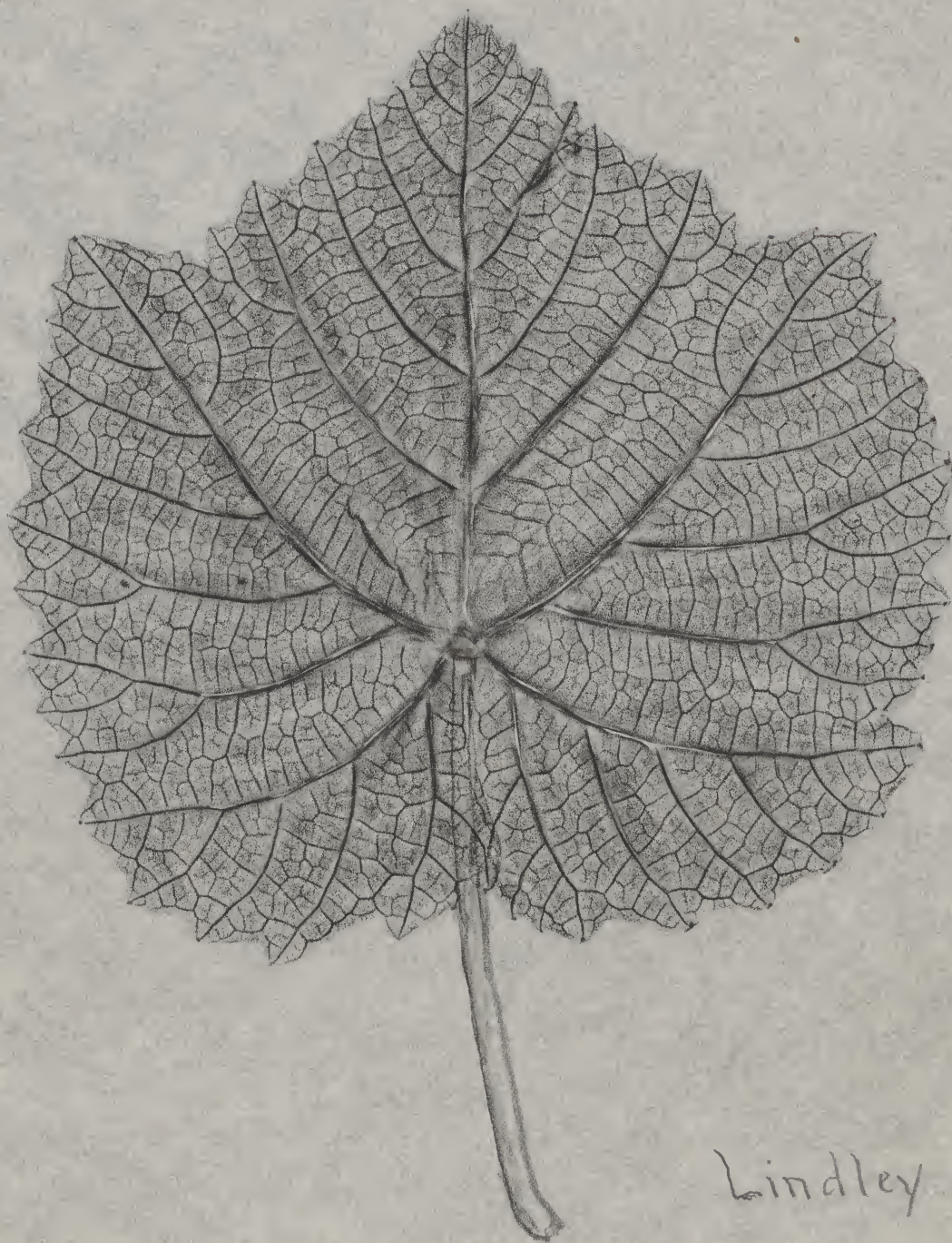
Lindley



Lindley

#10x10

6/8/42



Lindley

2 0x10

6/8/42



Lindley

3 0210

6/8/42



Hindley

#4 ok 10

6/8/42



Lindley
#5 ox 10
6/8/42



Hindley
#6 ok 10
6/8/42



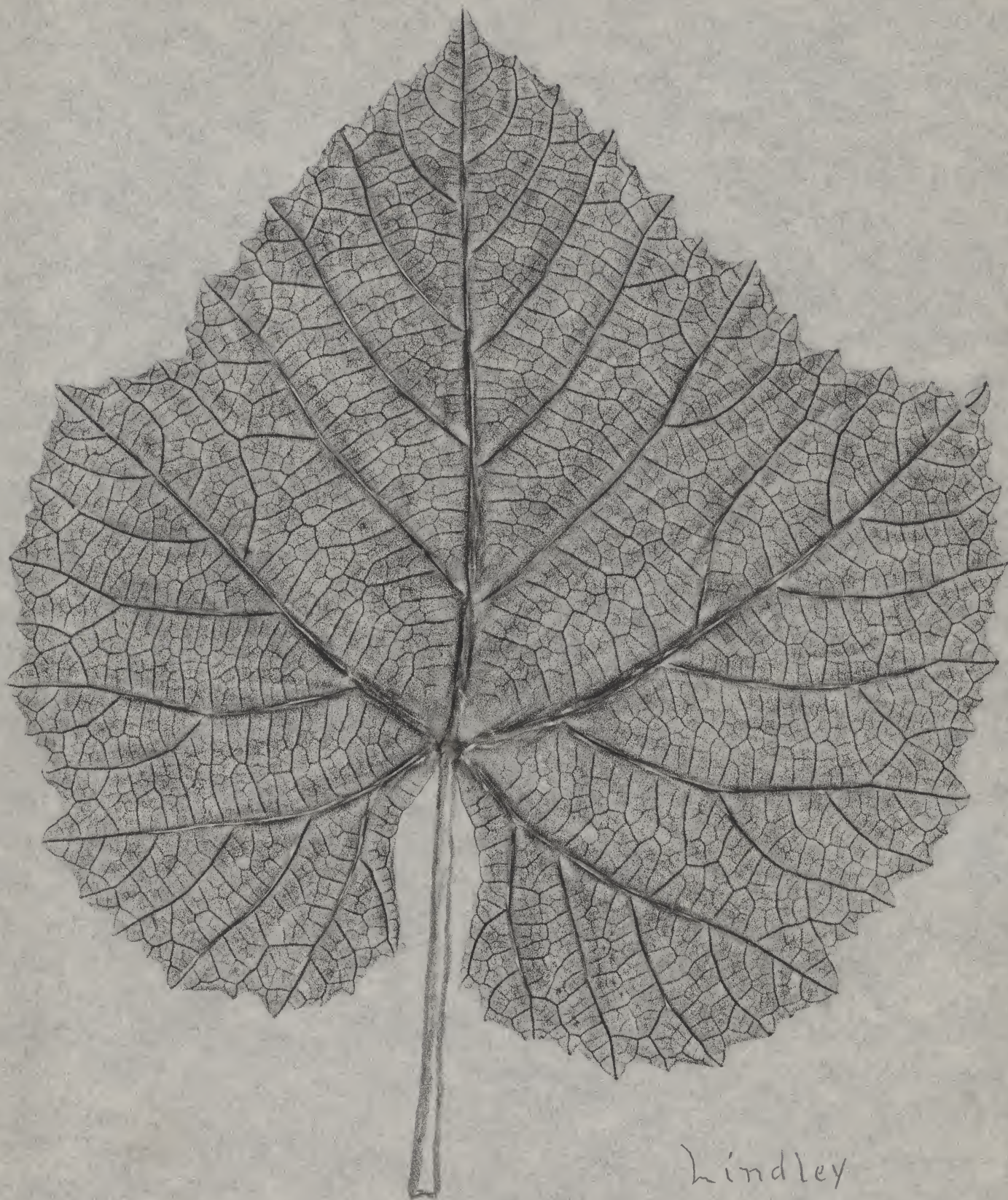
Lindley
#7 ox 10
6/8/42



Lindley

#8 of 10

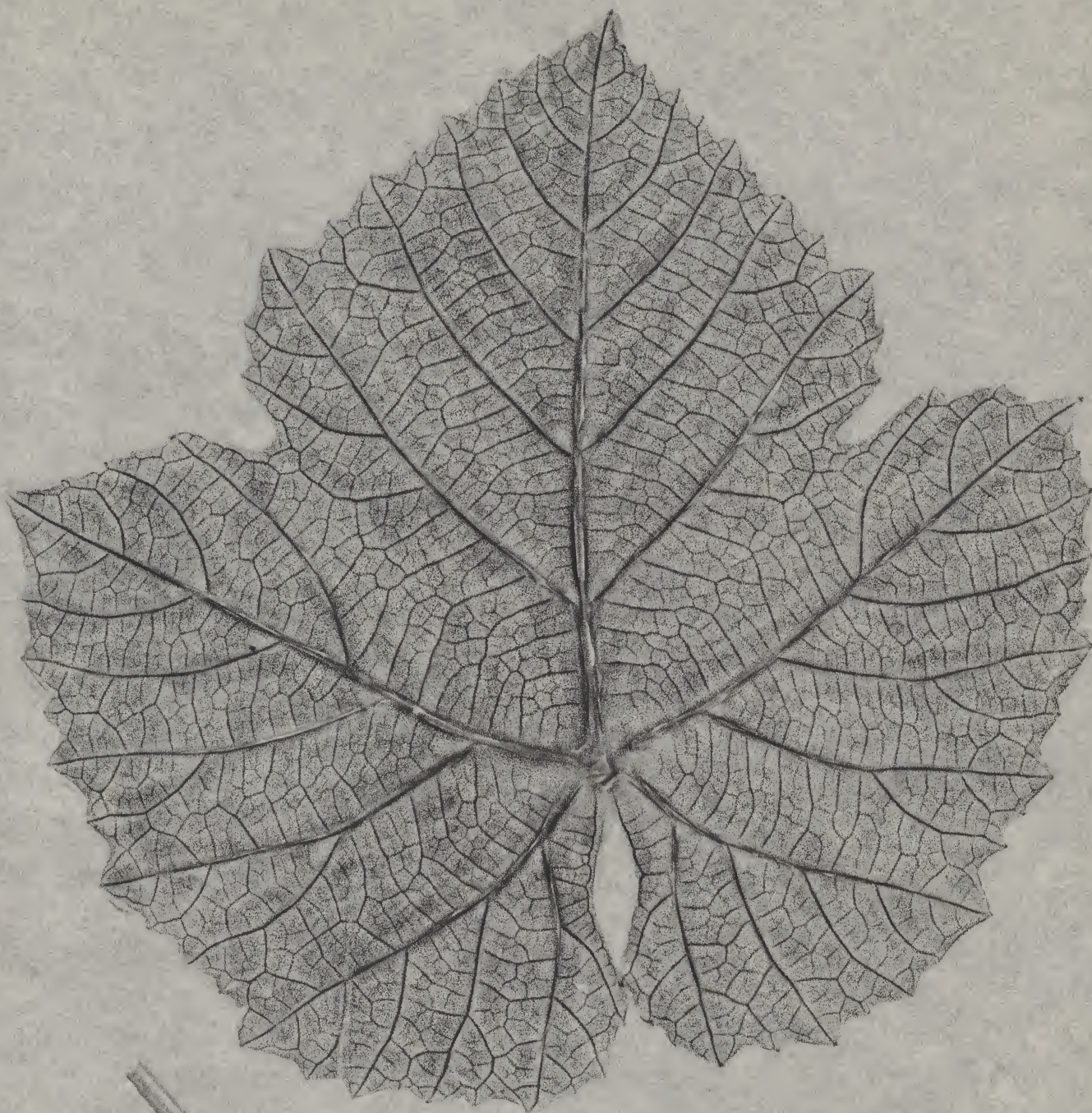
6/8/42



Lindley

#9 0x10

6/8/42



Lindley

10 0x10

6/8/42

Letter



Loretto

#1, 6x10

6/19/42



Loretto

#2. 0210

6/19/42



Loretto.

#3 0810

6/19/42



Loretto

#4 0210

6/19/42



Loretto

"5 0210

6/19/42



Loretto

6 of 10

6/19/42



Loretto

#7 0x10

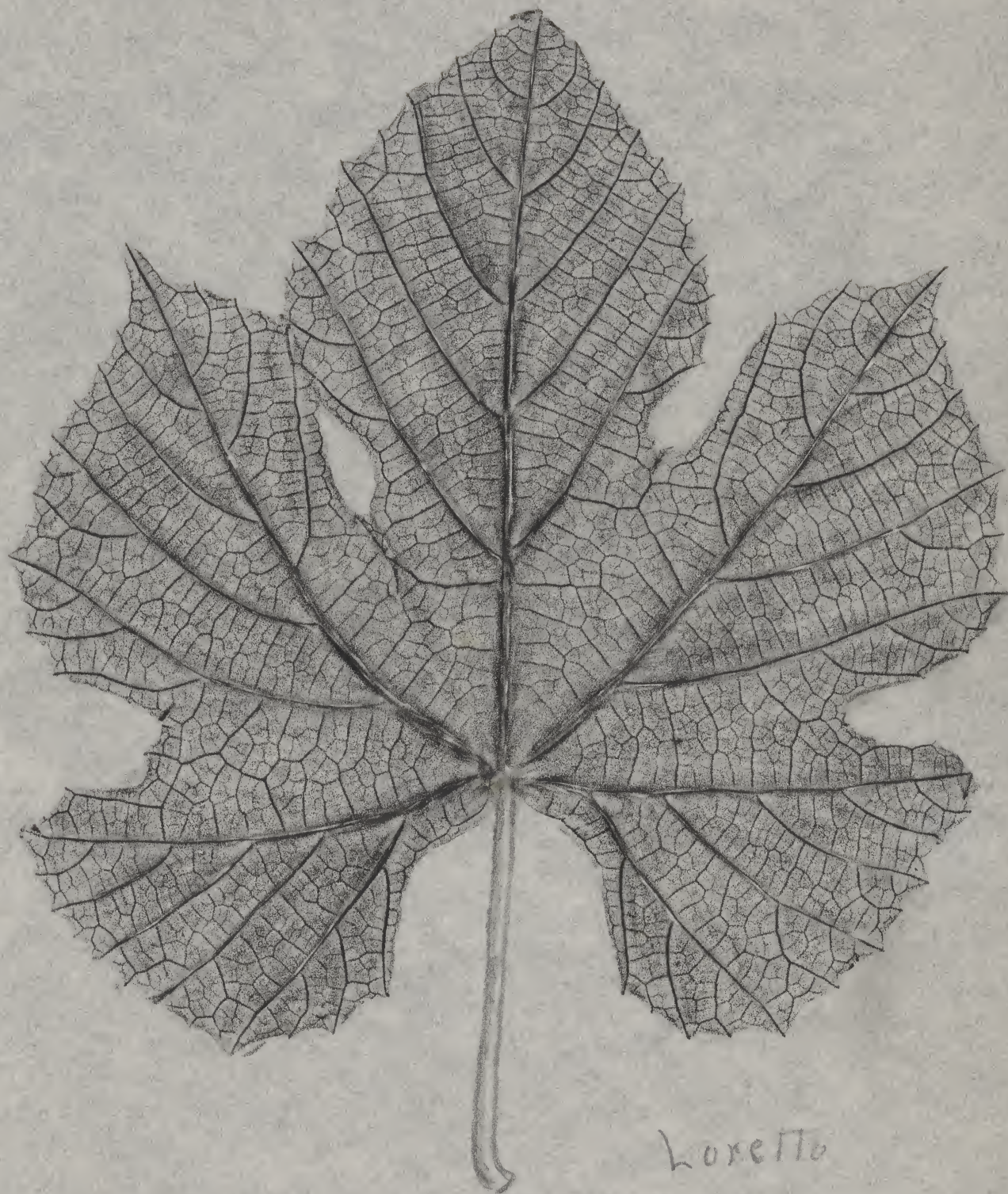
4/19/42



Loretto

#8.0X10

6/19/42



Lorello

#9 0210

6/19/42



Loretto

#10 - 0810

6/19/42

Lentix



Lutic

#1 C10

6.24/4-2



Lutie

#2 0x10

6/24/42



Lutie

#3 0x10

6/24/42



Lutie

#4 0x10

6/24/42



Lutic

#5 0x10

6/24/42



Lutie

#6 - 0x10

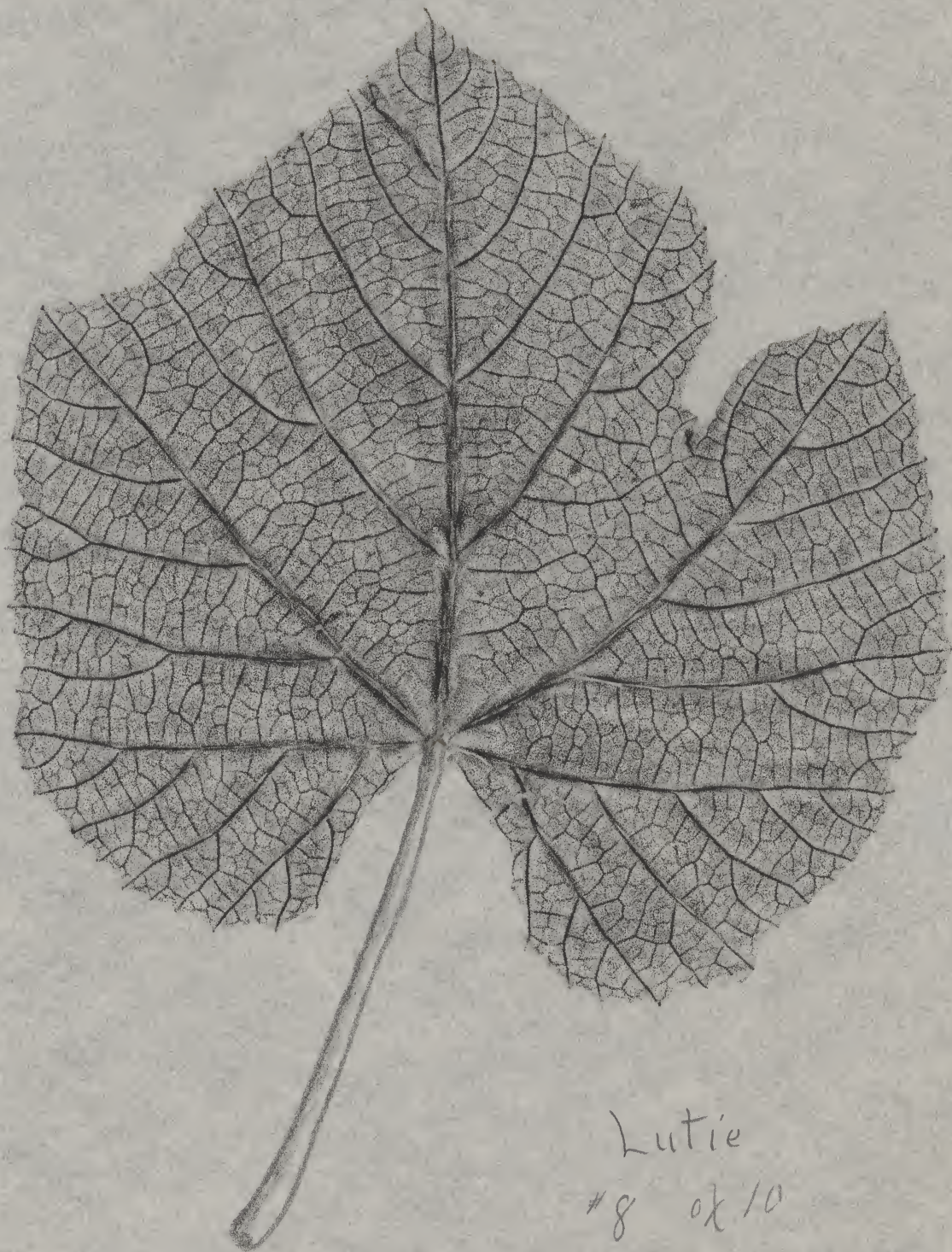
6/24/42



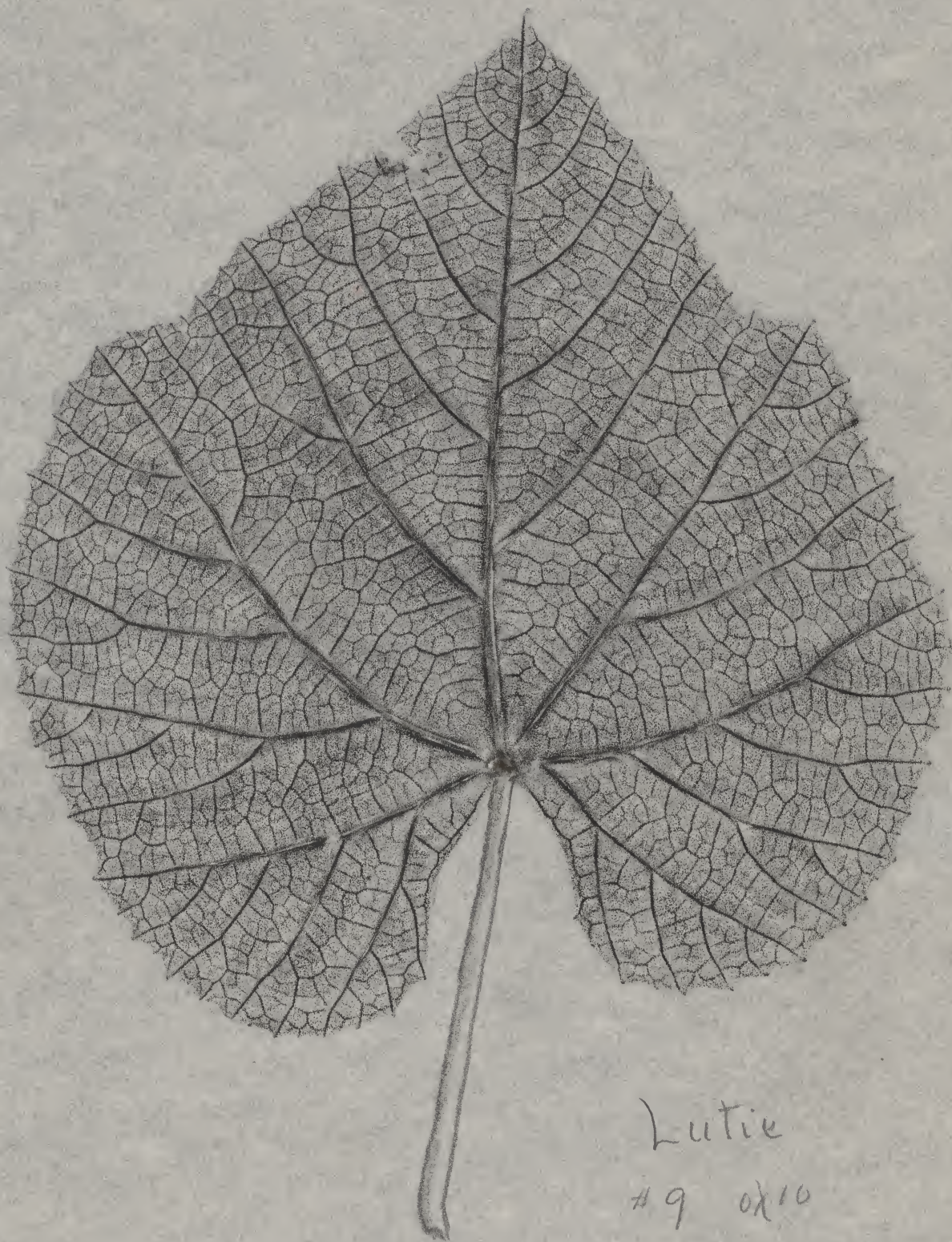
Lutie

#7 0210

6/24/42



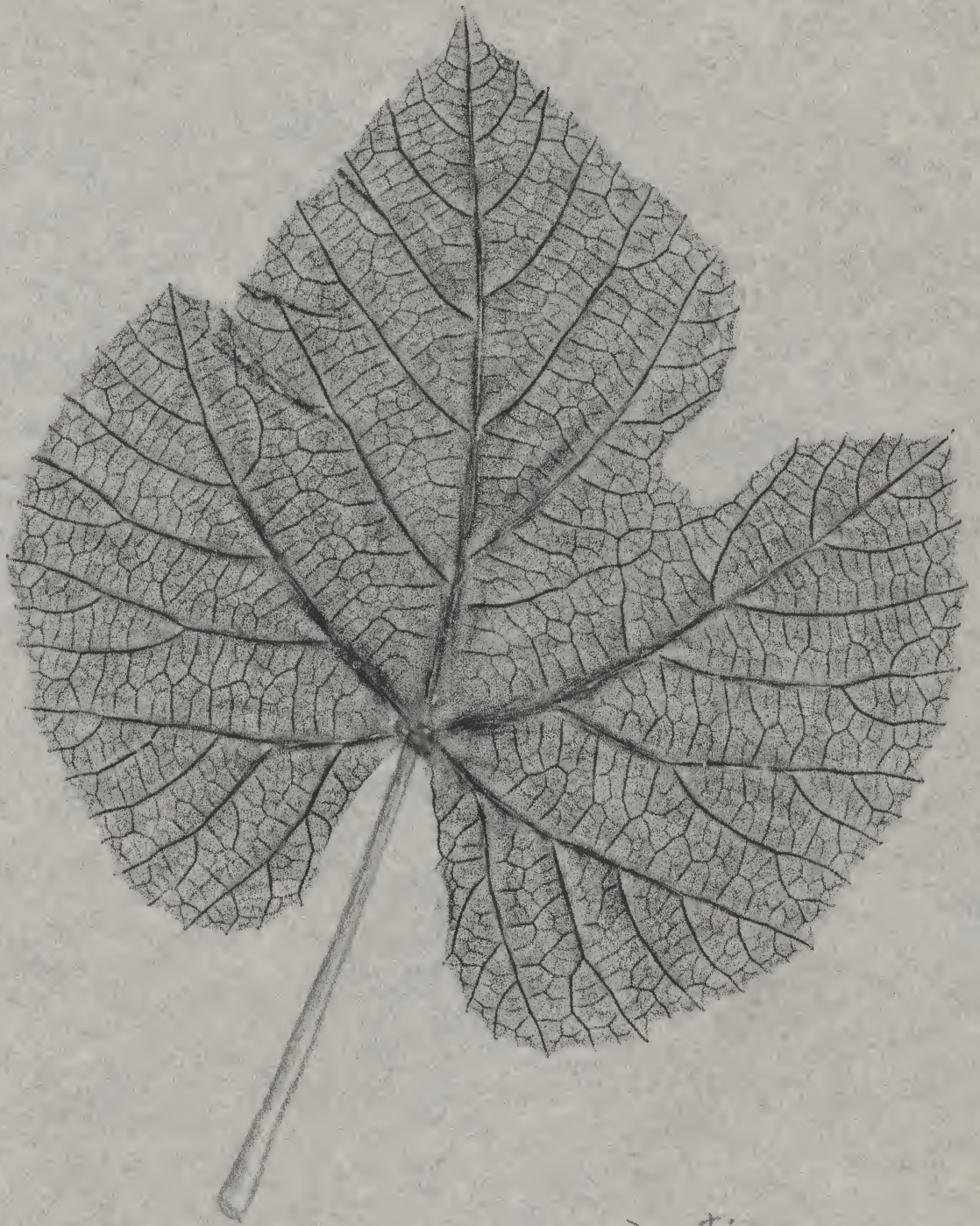
Lutie
#8 ok 10
6/24/42



Lutie

#9 0x10

6/24/12



Lutie

#10 0x10

6/24/42

Moore



Moore

#1 0X10

6/23/42



Moore

#2 0x10

6/23/42



moore

#3 0x10

6/23/42



Moore

#4 0x10

6/23/42



Moore

#5 0x10

6/25/12



Moore

#6 0210

6/23/42



Moore

#7 x10

6/23/42



moore

8 of 10

6/23/42



Moore

9 0x10

6/23/42



Moore

#10 0x10

6/23/42

Niagara



Niagara

" 1 x 10

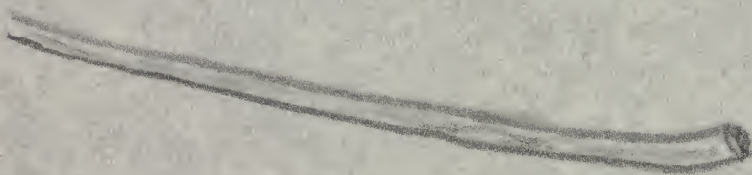
6/3/42



Niagara

#2 ok10

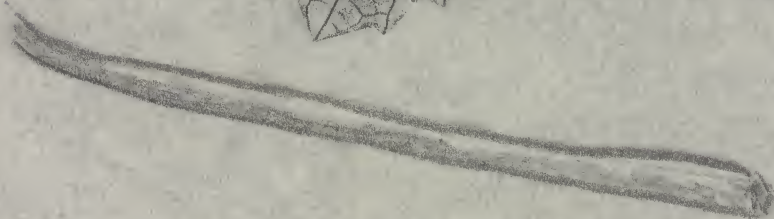
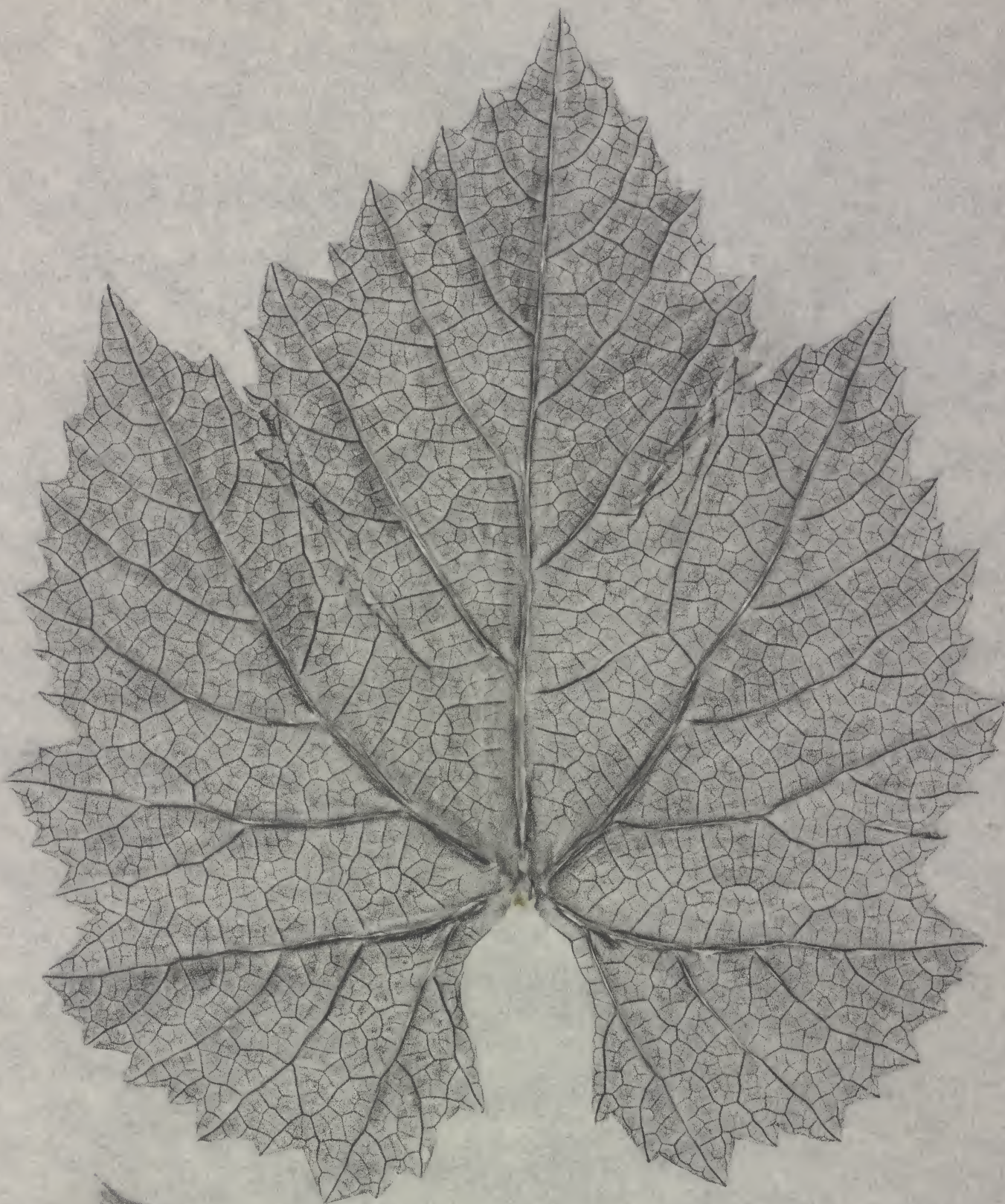
6/3/42



Niagara

#3 or 10

6/3/42



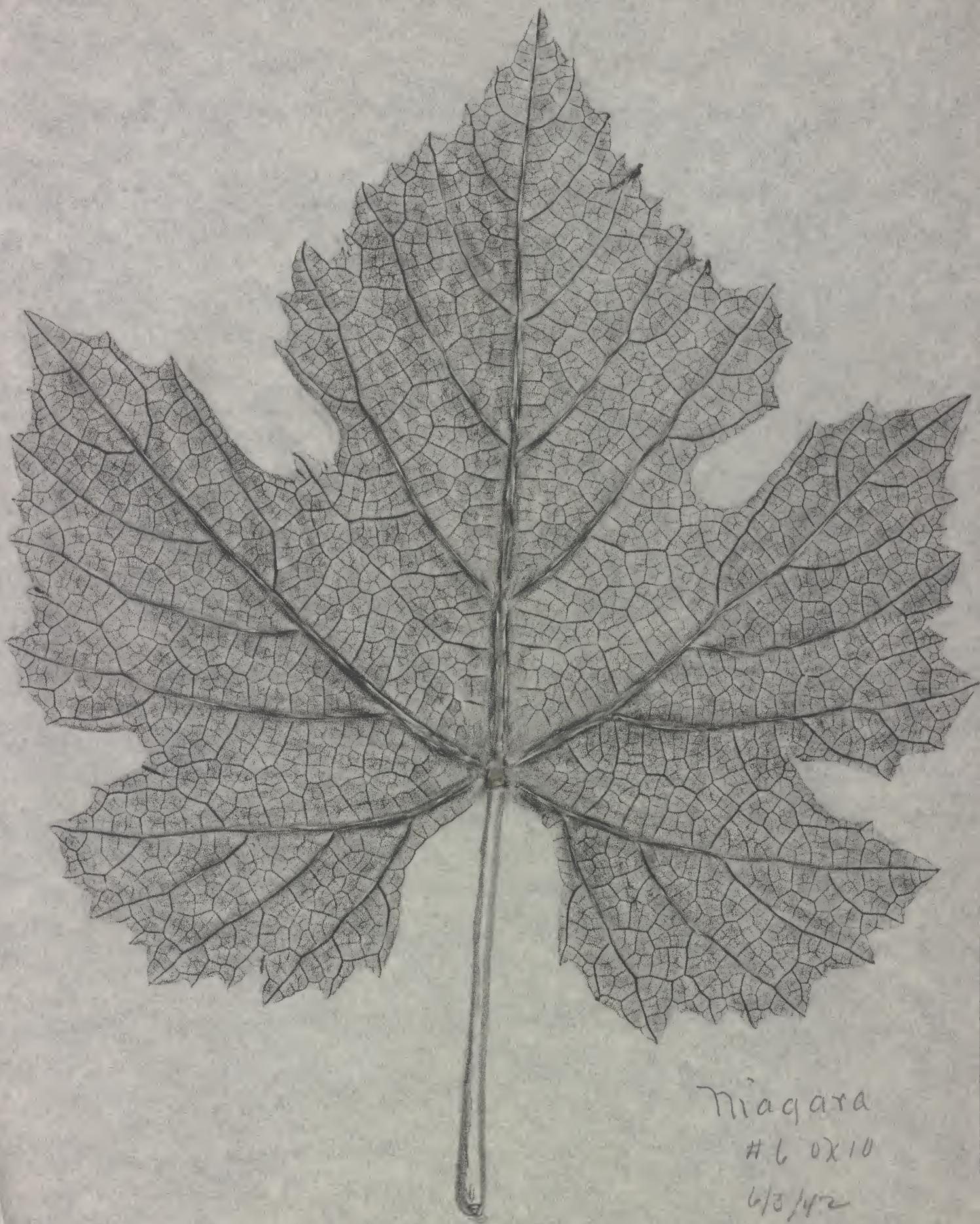
Niagara

4 ex 10

6/3/72



Niagara
#5 0210
6/3/42



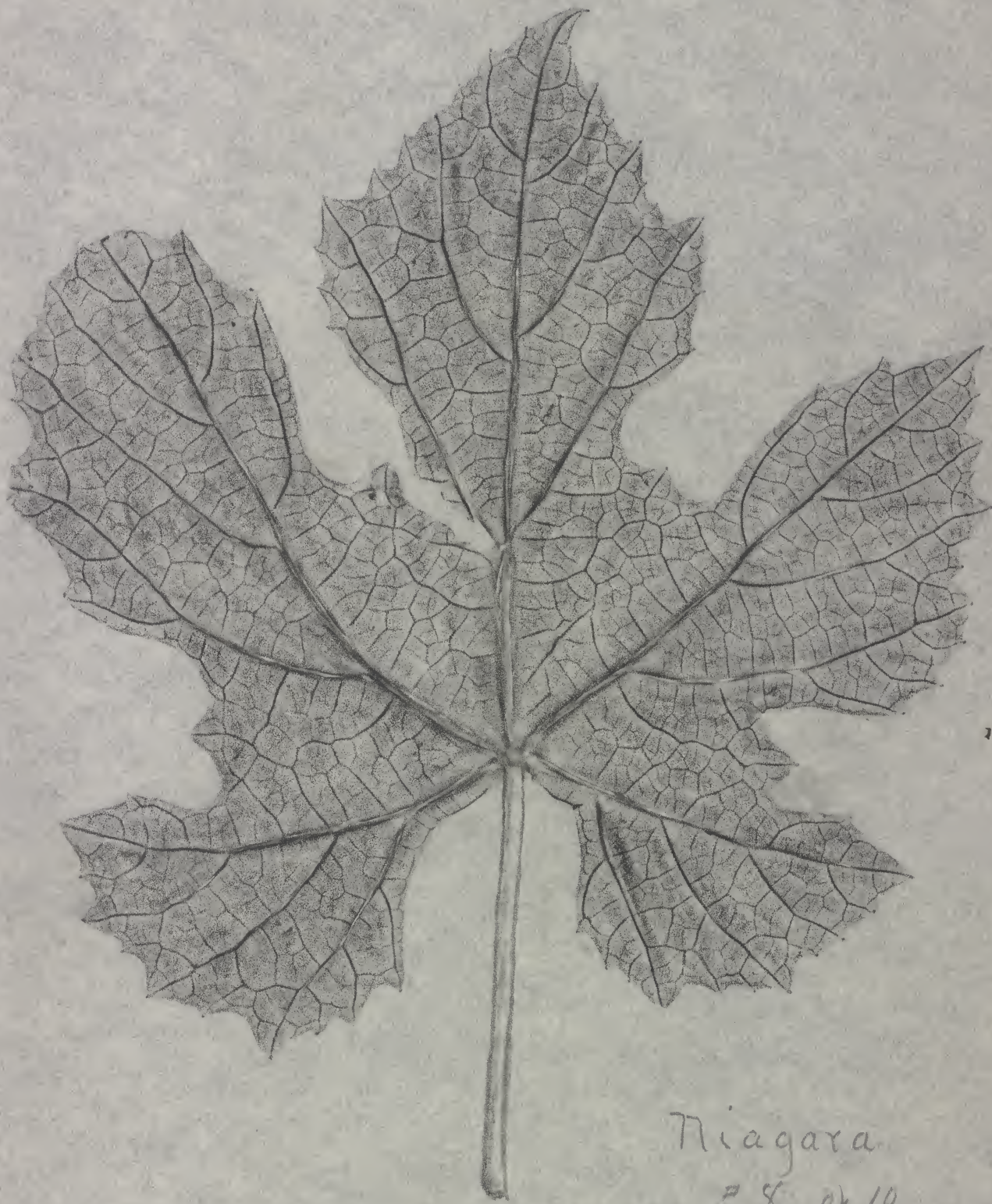
Niagara
#6 0X10
6/3/42



Niagara

#7 1210

6/3/42



Niagara

8 ox 10

6/3/42



#9

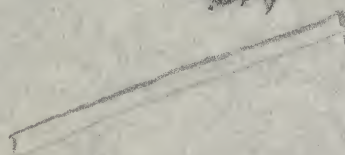


#10

6x10

6/3/42

Niagara



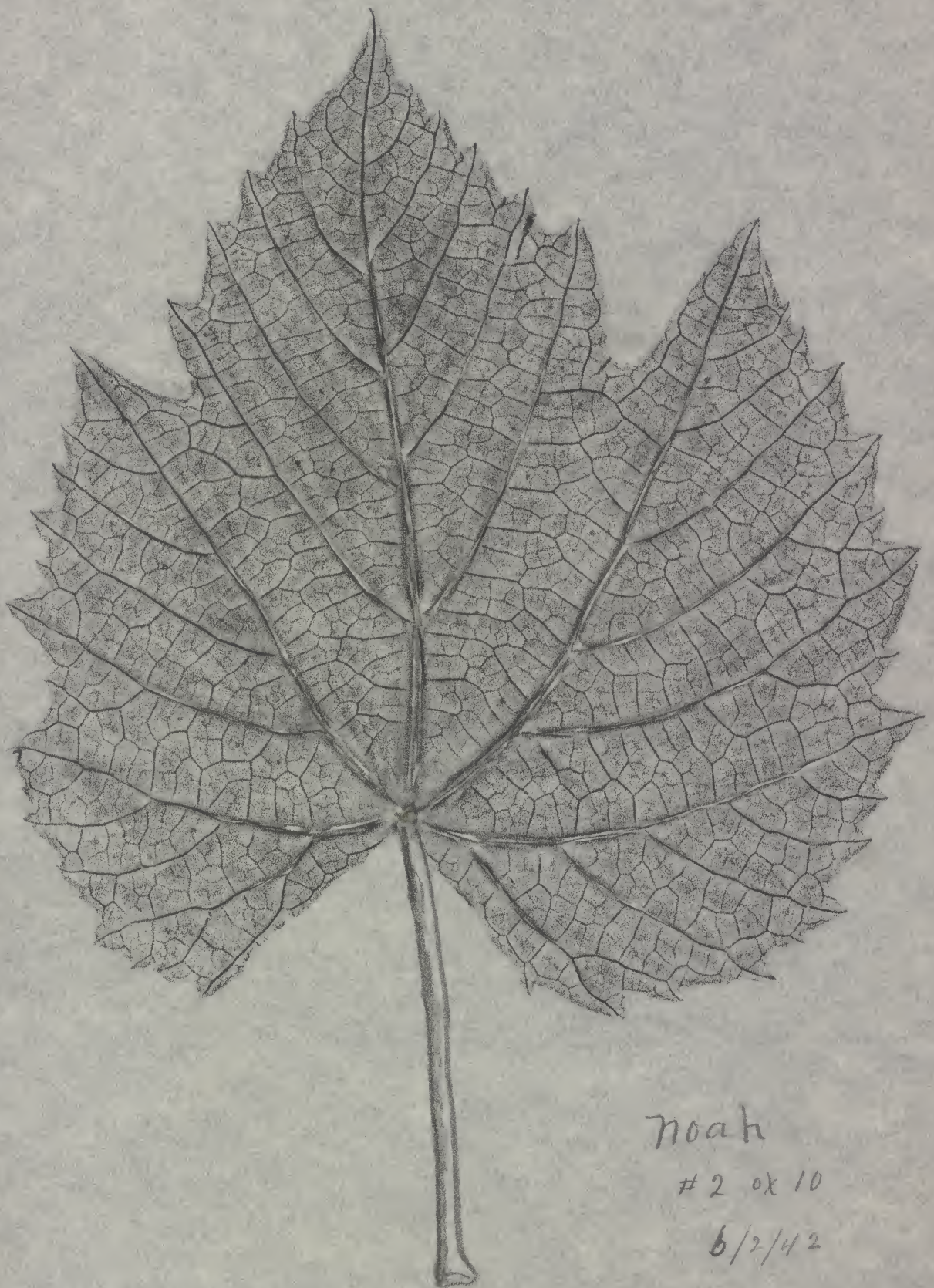
Wash



noah

#1 0x10

6/2/42



Noah

#2 ox 10

6/2/42



Noah
#3 ox 10
6/2/12



noah

#4 of 10

6/2/42



Noah

15 0x10

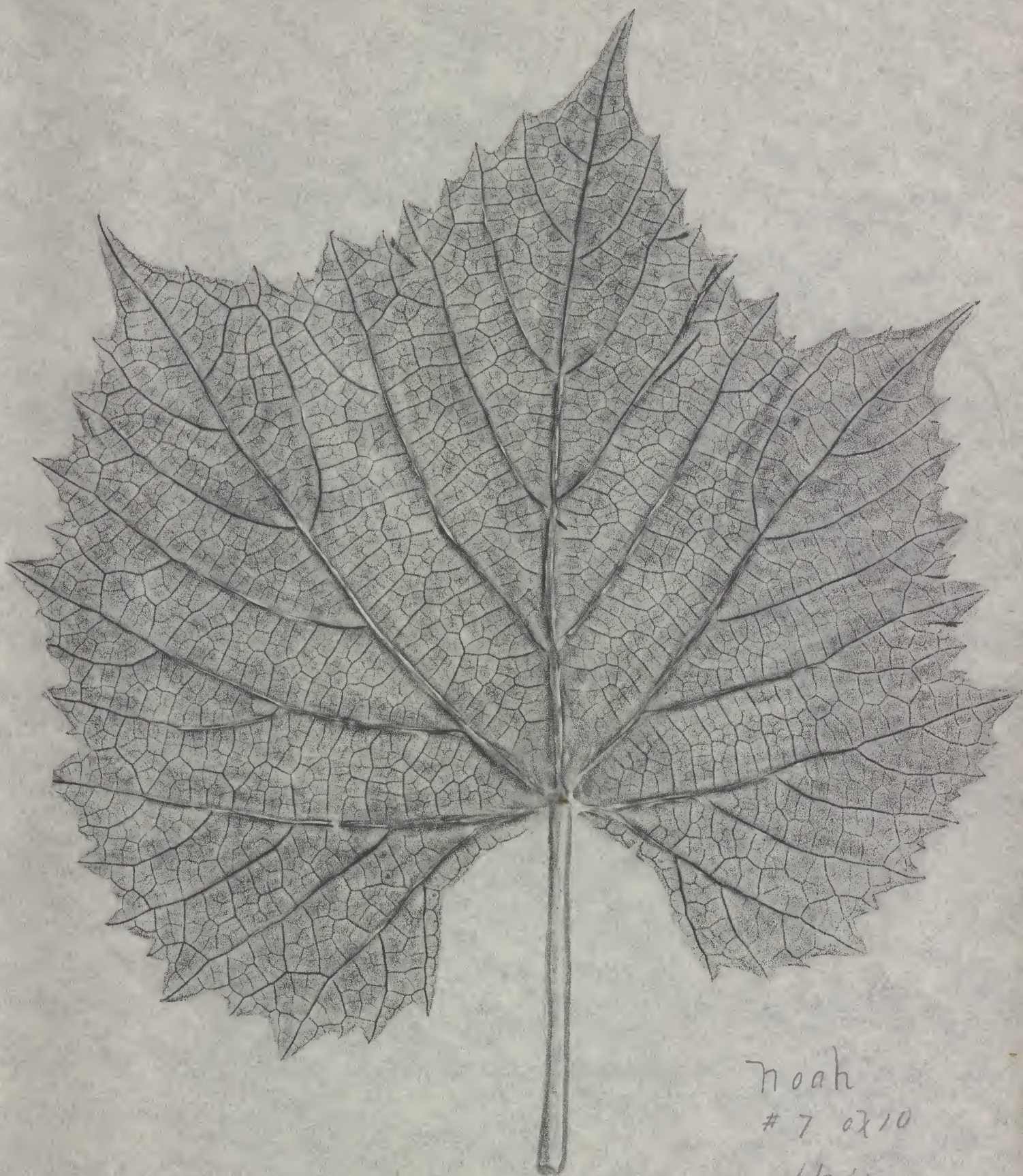
6/2/42



Noah

#6 or 10

6/2/42



Noah

7 0210

6/2/42



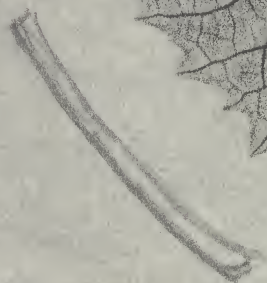
Noah

8 0x10

6/2/42



#9



#10

ox 10

Noah

6/2/42

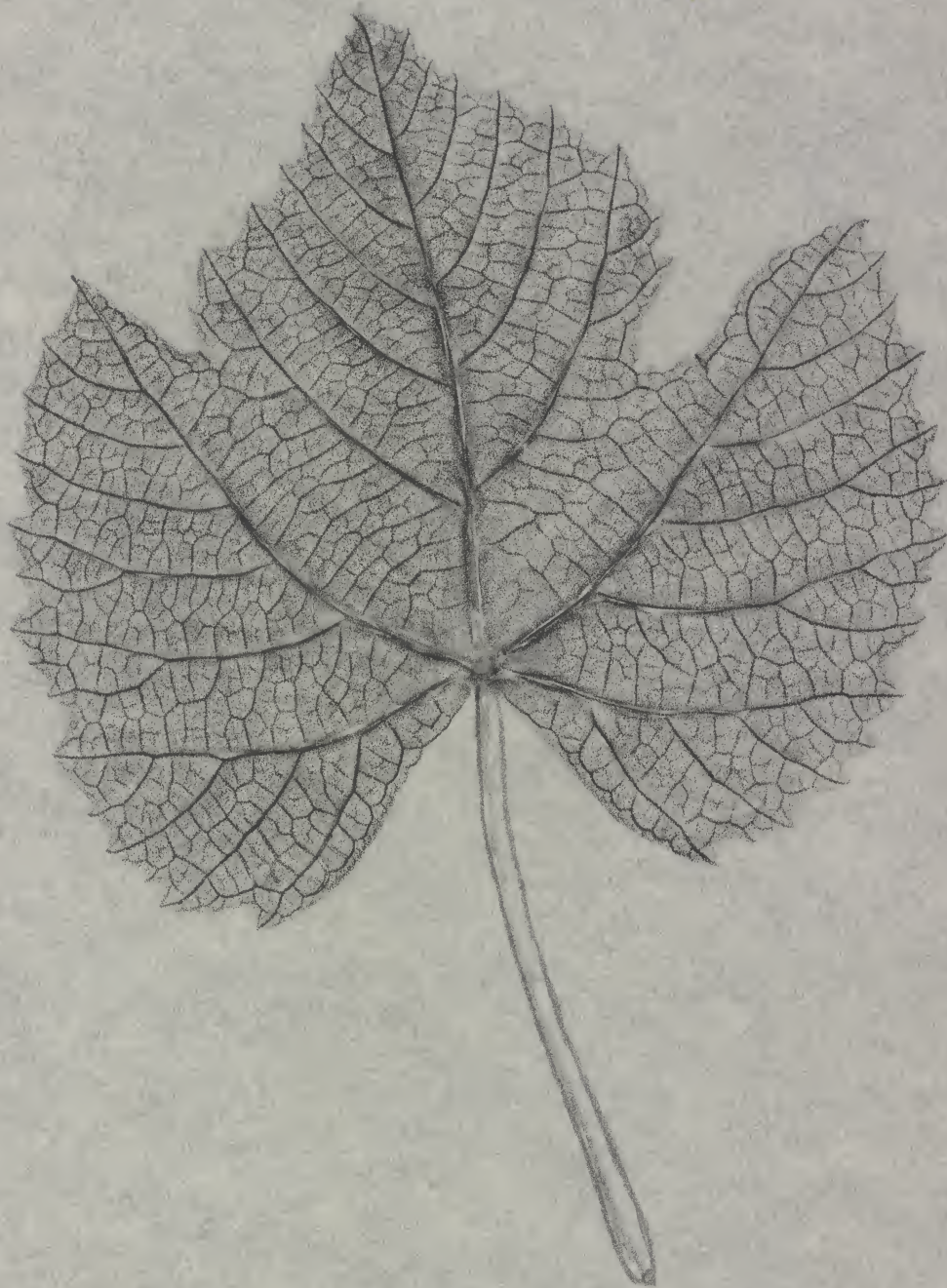
Portland



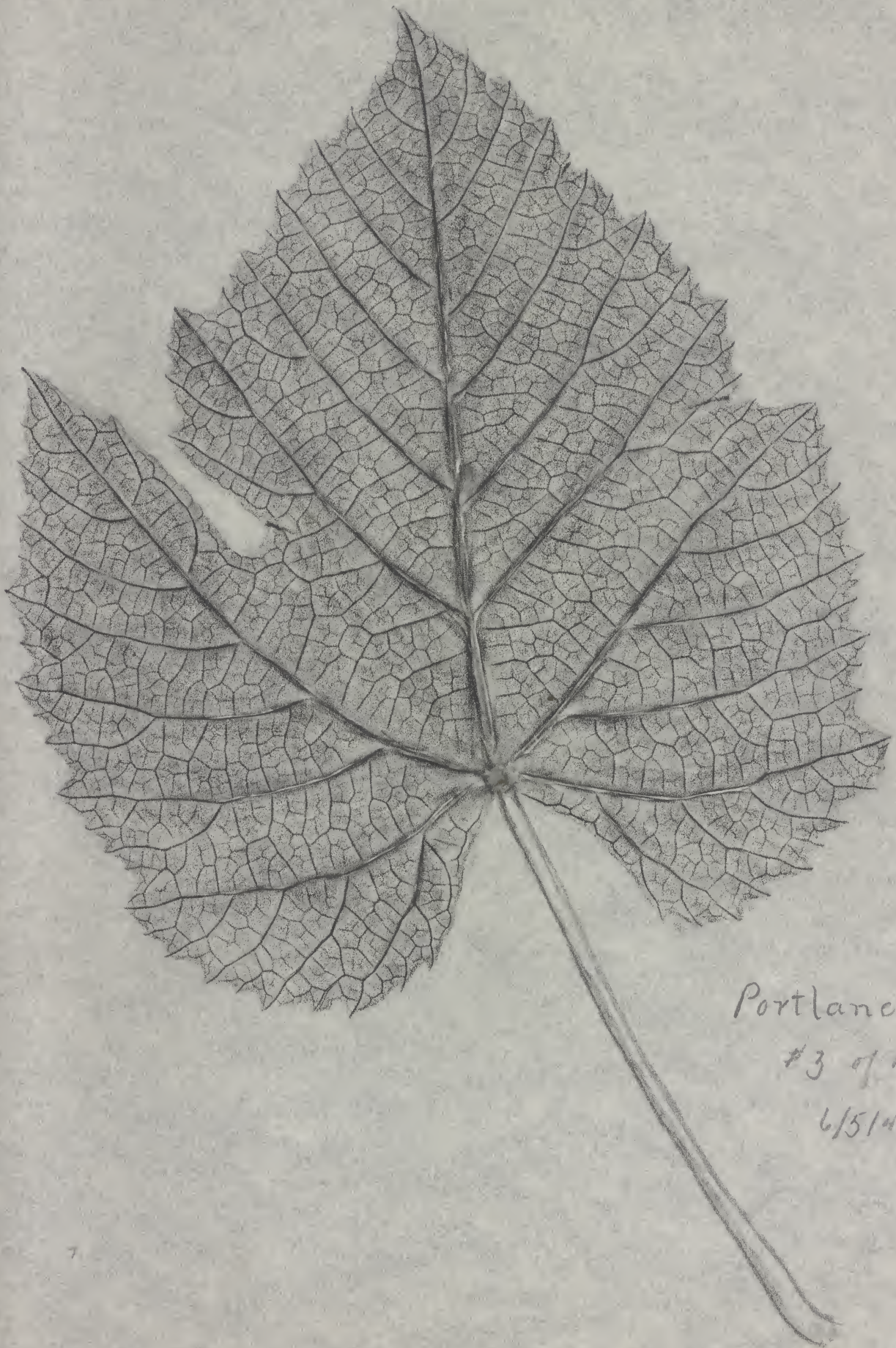
Portland

#1 0x10

6/5/42



Portland
#2 of 10
6/5/42



Portland

#3 of 10

6/5/42







Portland

#6 0210

6/5/42



Portland

#7 of 10

6/5/42



Portland

#8 of 10

6/5/42



Portland

#9 ox 10

6/5/42



Portland

* 10 0x10

6/5/42

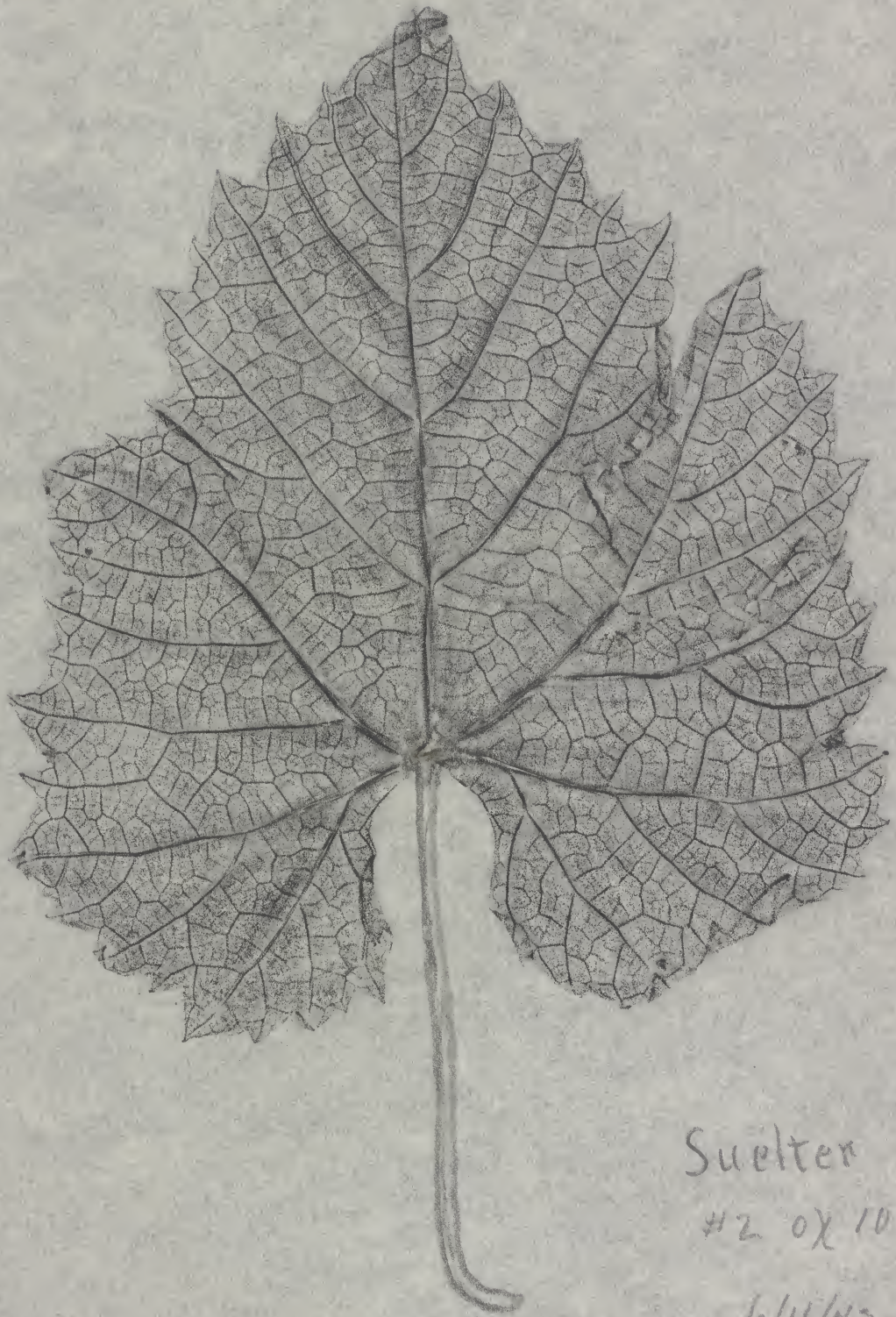
Sweeten



Suelter

#1 ok 10

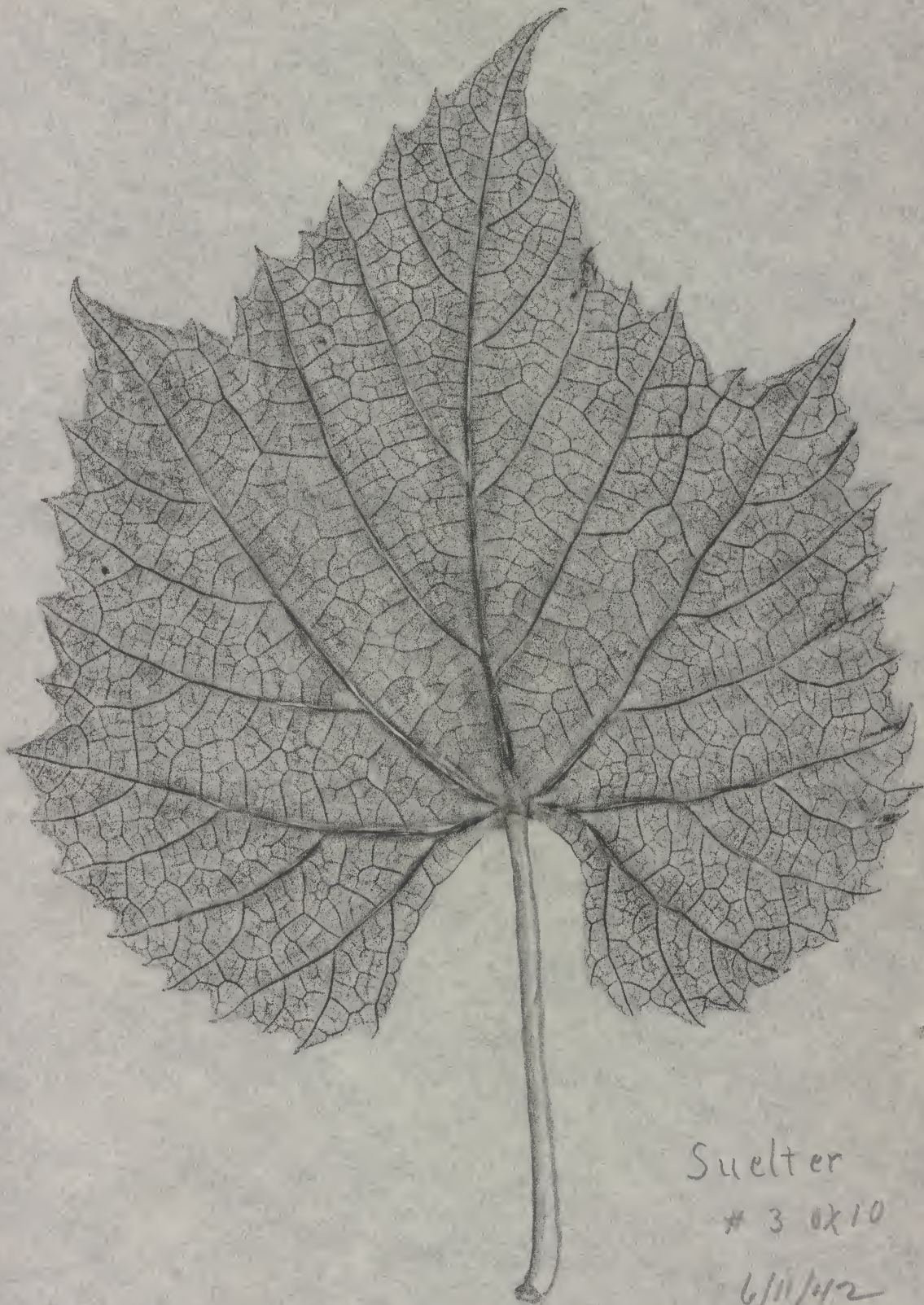
6/11/42



Suelter

#2 OX 10

6/11/42



Suelter

3 0x10

6/11/42



Suelter

#4 ex 10

6/11/42



Suelter

#5 of 10

6/11/42



Suelter

#6 ox 10

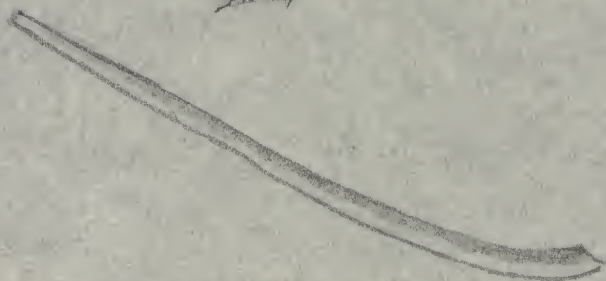
6/11/42

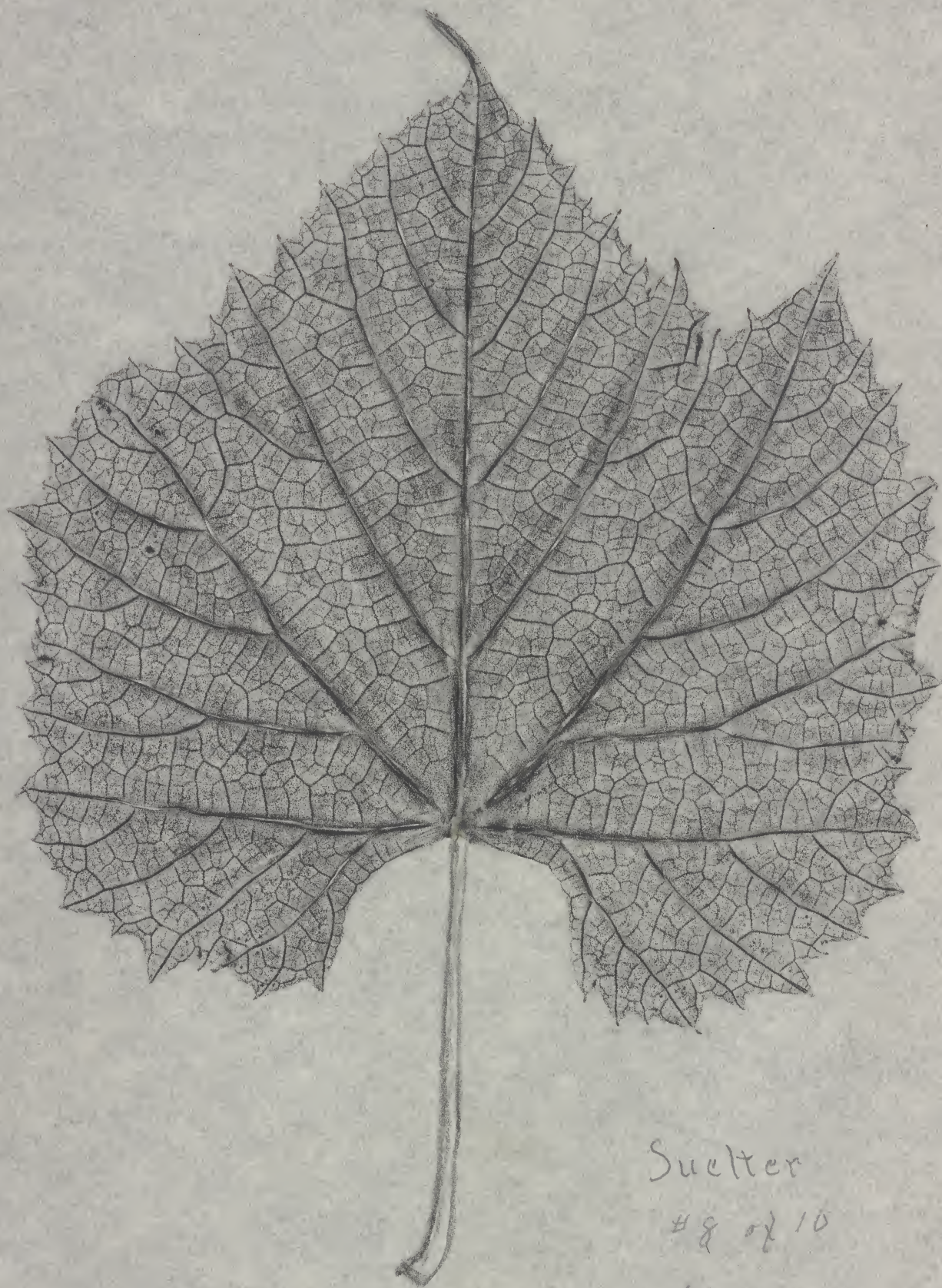


Suelter

#7 ox 10

6/11/42

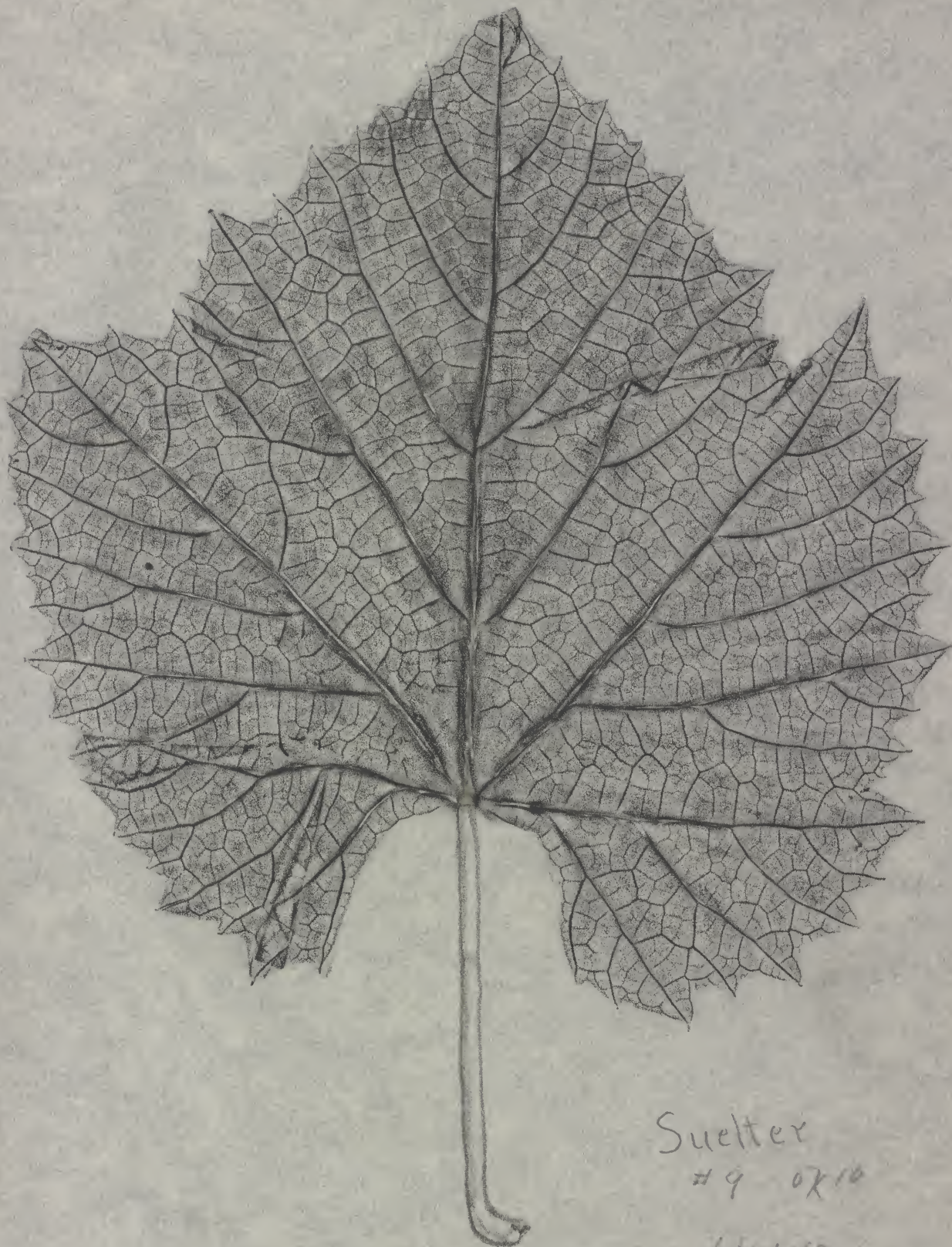




Suelter

#8 of 10

6/11/42



Suelter
#9 0x10

6/11/42



Suelter

#10 of 10

6/11/42

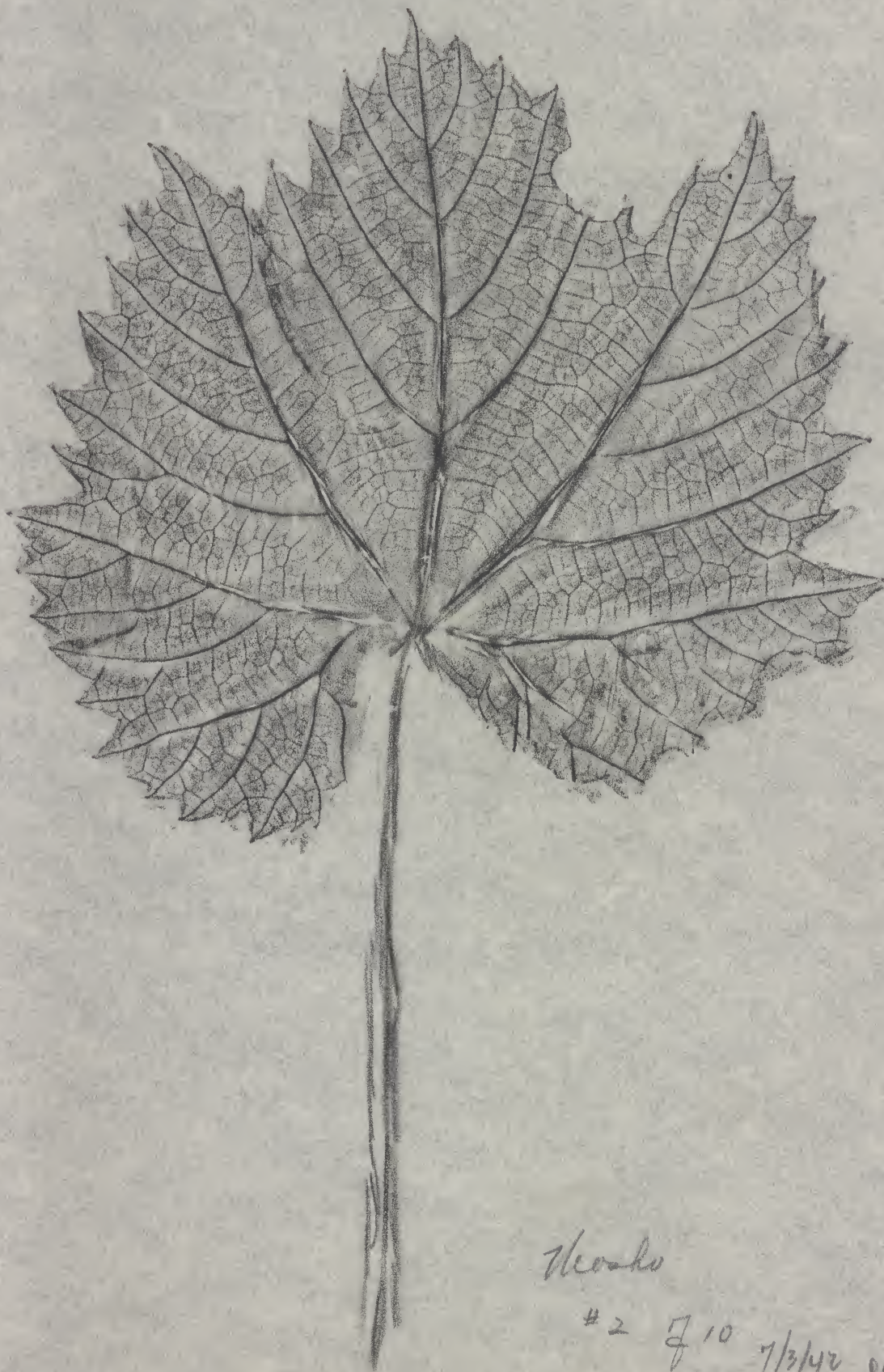


Heosher

No 1 7 10

7/3/42

cm



Ulmus

#2 7/10 7/3/42 cam



Kersho

#3 of 10

7/3/42

cm



Herzho

#4

810

7/3/42

ann



Urosko

#5 410

9/3/42 CMM



Heosho

#6 of 10

7/3/42 cam



Urosma

#7 7¹⁰ 7/3/42 call



Theridion
#8 of 10

7/3/42 cum



Hosaka

9 of 10

7/3/42
C.M.

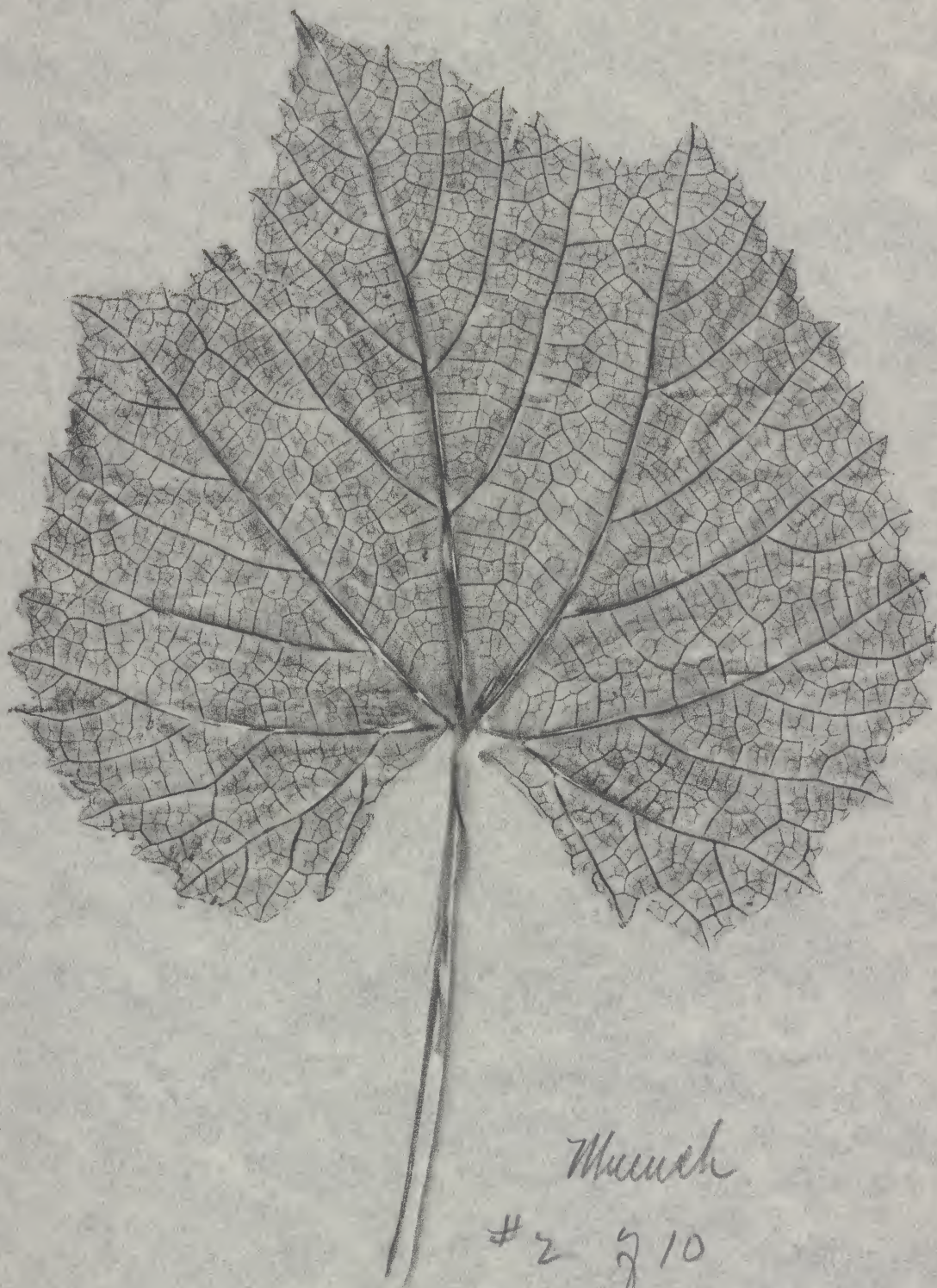


Neozho
10 of 10

7/3/12
CMM



Muech
#1 of 10
7/3/42
cam

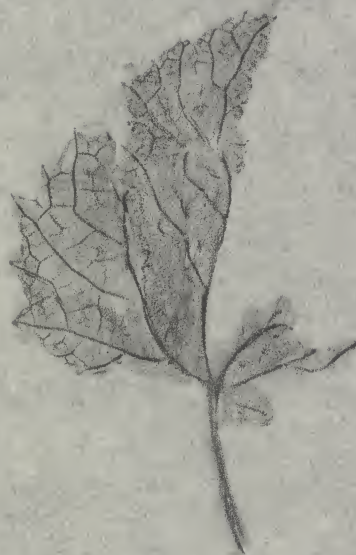


Munch

#2 7/10

7/3/42

cam

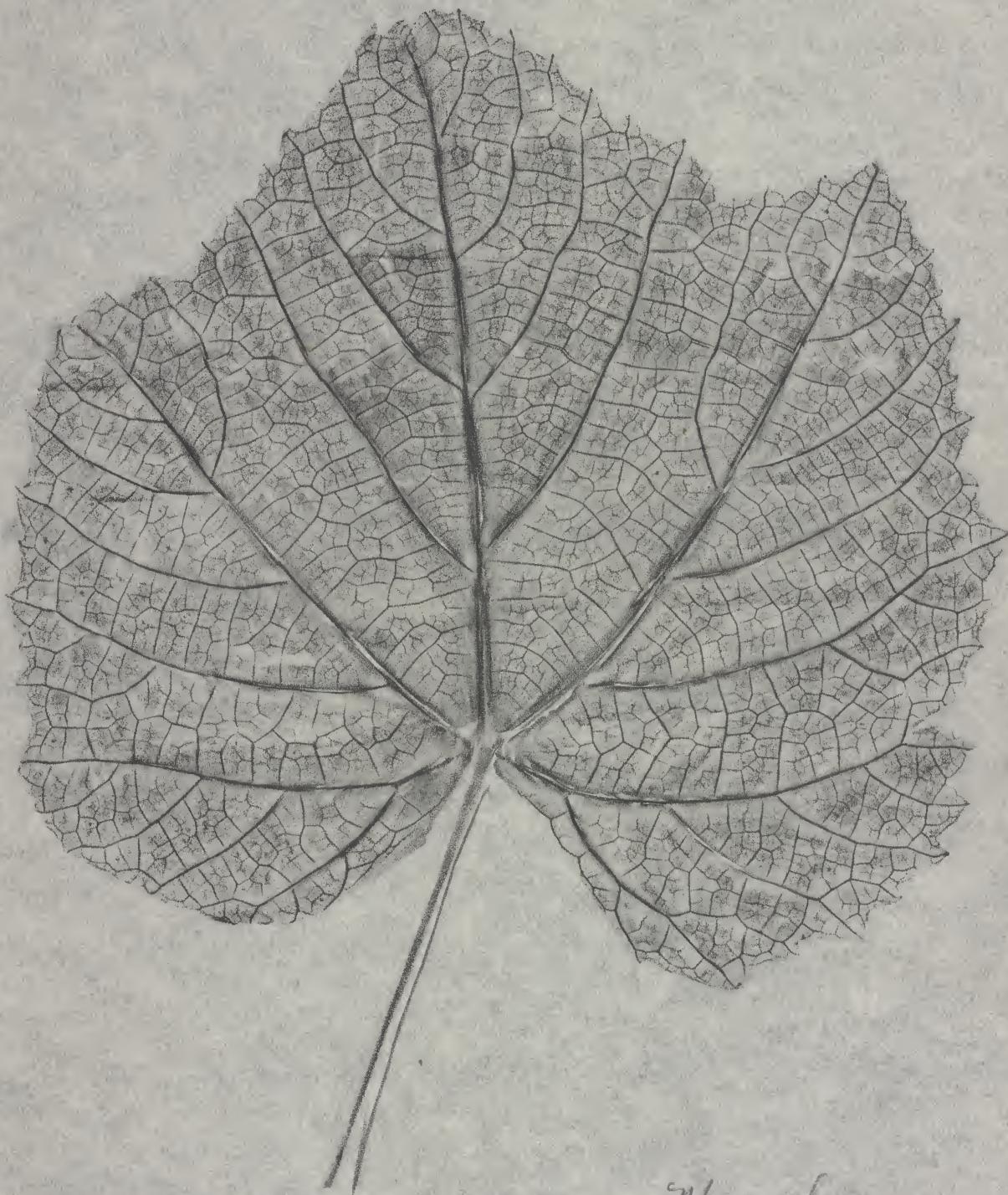


Wm. W. W.

#3 7/10

7/3/42

can



Muench

4 of 10

7/3/42

can



W. W. W. W.

#5 7 10

7/3/42

can



Munch
6210
7/3/42
Cane

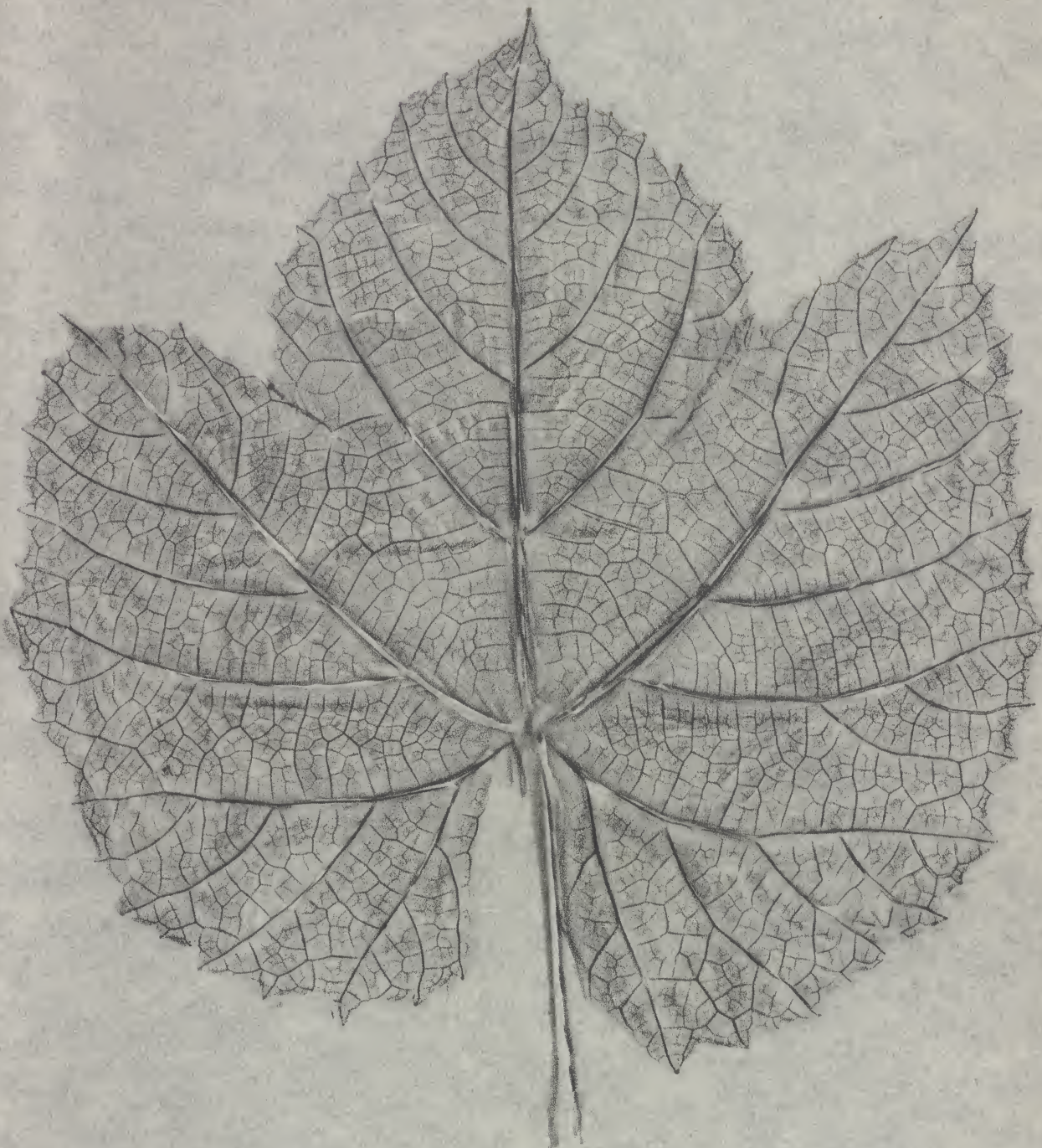


Muehlenbergia

7710

7/3/42

Canu



Muench

#8 of 10

7/3/42

cam



Mueen
+ 9 7 10
7/3/42

cm



March

10 7 10

7/3/52

clm